

508.947
apr 17

REPORT

J
87
H3H385
SLRA

OF THE

GOVERNOR OF THE TERRITORY OF HAWAII

TO THE

SECRETARY OF THE INTERIOR.

1904.

WASHINGTON:
GOVERNMENT PRINTING OFFICE.

1904.

REPORT

OF THE

GOVERNOR OF THE TERRITORY OF HAWAII

TO THE

SECRETARY OF THE INTERIOR.

1904.

WASHINGTON:
GOVERNMENT PRINTING OFFICE.

1904.

CONTENTS.

GENERAL SUBJECTS:	Page.
1. The Territory	5
2. Number of islands and location.....	5
3. Resources	5
4. Climate	6
5. Temperature	6
6. Rain	6
7. Health	6
8. Population	7
9. History	7
10. Organization and departments	7
11. County government	8
12. Labor conditions	8
13. Finances	12
14. Chinese fund	13
15. Fire claims	14
16. Embezzlements	15
17. Internal-revenue matters	15
18. Internal improvements	16
19. Light-houses	16
20. Buildings	17
21. Fisheries	18
22. Immediate legislation	19
23. Needed appropriations	21
 DESCRIPTORS AND REPORTS OF THE VARIOUS DEPARTMENTS OF THE GOVERNMENT OF HAWAII:	
1. Health	23
2. Schools	27
3. Lands	36
4. Public works	58
5. Finance	67
6. Audit	76
7. Judiciary	80
8. Law	84
9. Police	89
10. Survey	99
11. Meteorology	101
12. Entomology	103
13. Forestry	104
 DESCRIPTION OF INDUSTRIES AND ENTERPRISES:	
1. Sugar	108
2. Coffee	114
3. Sisal	117
4. Pineapples	118
5. Vanilla	119
6. Live stock	121
7. Rapid transit	125
 COMMERCE AND NAVIGATION:	
1. The commerce of Hawaii	128
2. Steamship communication	133
 APPENDIX—COMMUNICATIONS FROM PUBLIC ORGANIZATIONS IN HAWAII RECOMMENDING APPROPRIATIONS:	
1. Chamber of Commerce, Honolulu, A	137
2. Chamber of Commerce, Honolulu, B	138
3. Merchants' Association, Honolulu, C	139
4. Board of Trade, Hilo, Hawaii, D	141
5. Improvement Association of Wailuku, Maui, E	143
6. Territorial register and directory for 1904	145
 Map of the Territory of Hawaii, compiled in the General Land Office from data on file in United States Coast and Geodetic Survey, Hydrographic Office, Hawaiian government surveys, and other authentic sources.	



REPORT

OF THE

GOVERNOR OF THE TERRITORY OF HAWAII.

EXECUTIVE CHAMBER,
Honolulu, Hawaii, September 7, 1904.

SIR: I have the honor to submit herewith my annual report on affairs in Hawaii for 1904:

The Territory of Hawaii is among the most isolated of the political subdivisions of the United States, but by no means the smallest or least important, for has it not upset the claim of the famous Bay State to be the "Hub," in that a circle drawn with the Island of Hawaii as a center shows the Philippines on the circumference to the west and the city of Boston just on the edge to the east, and there are those who ascribe certain opposition to expansion to this fact.

Hawaii is not an insular possession, but an integral part of the Union, organized as a Territory, with as large a measure of self-government as has ever been granted by Congress, and it is destined to play an important part in American supremacy of the Pacific.

NUMBER OF ISLANDS AND LOCATIONS.

The Territory is composed of eight principal islands, with an area of 6,640 square miles—580 square miles more than Connecticut and Rhode Island combined—located in the Pacific Ocean, some 22° north of the equator, 2,100 miles from San Francisco, and 3,340 miles from Japan, at a point which every one of that endless line of steamers must pass that will soon be carrying, through the Panama Canal, an immense traffic between the Atlantic ports of Europe and America and the Orient; commerce that needs no vivid imagination to recognize will far surpass that of the entire Atlantic Ocean, and the impulse of which is already felt in the rapid increase of length and draft of steamers now calling at Honolulu.

RESOURCES.

A study of these pages will show that the resources of this Territory are almost entirely agricultural. Owing to volcanic origin there are no minerals and the forests furnish no lumber. Sugar is the main product and the article which follows shows clearly its importance. Rice has for years stood second, but the restriction of Chinese immigration and competition with Louisiana have crippled its production. Coffee at one time bid fair to take second place in our exports, but the tremendous increase in the world's production of coffee and lack of protection has caused such a fall in the market value that many fields

were abandoned as unprofitable. Undoubtedly Hawaii's opportunities for development consist in the products from tropical plants or vines which can not be grown in the temperate zone—such as sugar, coffee, pineapples, vanilla, guava jellies, sisal, etc.

The government lands are managed by a commissioner of public lands, through whose courtesy the following detailed report is obtained. The proceeds of the sale of lands are by law to be applied to the redemption of the Territory's bonded debt.

The best asset of the Territory is the unbroken record of its people in meeting every public obligation. No matter what changes have occurred or what element was in control, there has never been even a technical default.

Another asset of great value is illustrated by the taxes collected and the willingness with which they are paid. The large corporations, principally those dealing in sugar, pay over 50 per cent of the taxes received, and the revenue from the tax on personal property almost equals that on real. Both facts illustrate a recognition on the part of the people that the government must be supported and shows a disposition to assist that surpasses that of most communities.

CLIMATE.

The climate is unexcelled, and owing to the trade winds and ocean currents, it can not be compared with other points of the same latitude or isotherm.

TEMPERATURE.

The temperature varies from an annual average of 74° on the seashore and 64° on the high land to 32° on the summits of the highest mountains, which are often snowclad.

RAIN.

The range of rainfall is from a few inches per annum on the dry and deserted lava-covered areas on the lee side to some 400 inches or more in special localities on the well watered and wooded slopes to the windward.

HEALTH.

During the year the Territory has been fortunate in avoiding all epidemics, though there have been a few isolated sporadic cases of bubonic plague.

By a reference to the article on the health conditions in the Territory of Hawaii, it will be seen how peculiarly important our relations are to the question of health and how seriously they affect the commerce of the Pacific. The Panama Canal is now a certainty, and it is therefore none too soon to prepare Honolulu for the increased commerce it will bring. Tropical diseases prevalent at the Isthmus are now unknown in Hawaii, and our experience with Oriental diseases shows they find a ready culture under our equable climatic conditions. That the port of Honolulu should be clean concerns not only the Territory of Hawaii, but the entire Pacific coast of the United States, and to keep it so there should be every assistance from the Federal Government. In order that this problem may be approached satisfacto-

rily, it has been very properly suggested by the chamber of commerce that Congress authorize the President to appoint a commission, to consist of the surgeon in charge of the Marine-Hospital Service, a United States engineer connected with the War Department, and the local president of the board of health, to study the situation on the ground here and report to Congress whatever changes in quarantine regulation or regulations and methods of local authority or public works they may deem advisable for bettering the health conditions of this port. Such a plan could not but be beneficial to American interests.

POPULATION.

The last census, of 1900, gave Hawaii a population of 154,001, and it is estimated that those who have left the islands offset the arrivals. In 1902 there were 12,550 registered voters. The organic act allows practically universal suffrage, there being no restriction on even the wards of the Territory at the leper settlement, while the natives were not required to understand the English language in order to qualify as voters, although compulsory education has existed here since 1850, and English has been the only language taught in the public schools since 1887.

HISTORY.

It must not be thought that the Territory of Hawaii is a new undeveloped region or that the people are ignorant. Kamehameha III voluntarily gave the people their magna charta in 1839, and history shows few such instances of unselfish surrender of arbitrary authority and power.

The Kingdom of Hawaii was first recognized as an independent nation in 1843, and continued as such until annexed by treaty in 1898. It was then absorbed by the United States, whose Constitution was immediately enforced and such laws as did not conflict were continued until Congress could act.

ORGANIZATION.

On June 14, 1900, the so-called organic act took effect. Since then the Territory has been subject to the full result of American tariff and coastwise laws, surrendering its former postal and customs revenues to the Federal Government. This act was wisely drawn with a view to as little change as possible from the former conditions to the new. There are now no municipal nor county subdivisions. The same departments and offices that existed under the Republic of Hawaii were in most instances continued.

DEPARTMENTS.

There is a department of public works, which has charge of roads, bridges, wharves, public buildings, waterworks, sewer systems, public lighting plants, etc., throughout the whole group, and under which practically all internal improvements are conducted.

There is a board of health, in charge of the leper settlement and the inspection of fish, meat, and other foods for sale. It supervises the collection of vital statistics for the whole Territory and is given ample authority in case of epidemic. The board has constantly to supervise

the sanitary condition of every locality, and is doing much to inculcate a high public standard of cleanliness.

There is a police department, under a high sheriff, with deputy sheriffs on each island, described in detail hereafter.

A judiciary system exists, with a supreme court of three judges, whose decisions are final. There are six circuit courts, practically one on each island; and district or police courts for each of the subdivisions of the main six circuits.

A board of education, which carries on the work of the graded public schools, was established under the Monarchy, and its records have always been a source of great pride.

A treasury department, in charge of the collection of the entire funds of the Territory, either from taxes or any other revenue, has charge of our financial affairs. In this department there is a tax bureau, with an assessor and collector for each of the islands or main subdivisions. Under this department also falls the recorder's duties, with a single office located in Honolulu. The treasurer supervises all corporations, banks, and insurance companies.

An auditing department does all the bookkeeping and checks all vouchers and accounts.

COUNTY GOVERNMENT.

While the present system of government is both economical and simple, it appears to offer more advantages to the island of Oahu and the city of Honolulu, where, from necessity, nearly all authority centers. From this there has grown up a feeling of discontent in the outer districts, and instead of attempting to better the present conditions, and make through the legislature changes from time to time to provide a more thorough service, there has developed a general desire for county government, which it is thought will be a panacea for all difficulties. Just how municipalities or counties are to be organized is not yet clear. Few, if any, communities in the United States have been confronted with so difficult a task. A de facto active Territorial government, succeeding one in which for years has been centered the functions of both city, county, and State, with all the prerogatives and powers necessary thereto, whose securities have been sold and the proceeds disbursed in the building of local waterworks, sewer systems, and other internal improvements, some of which are revenue producing, is now desired to be cut up, with considerable of its revenue and property turned over, to elect county officials. The legislature of 1903 succeeded in passing a measure of this kind, but after an existence of thirteen days a decision of the supreme court was reached declaring that attempt illegal. At the last special session of the legislature, by joint resolution, the executive was requested to appoint a commission to draft a new county act, and it is now at work preparing such an act to be submitted to the legislature in February, 1905.

LABOR CONDITIONS.

As the sugar and rice industries of the Hawaiian Islands are the only ones employing agricultural or other laborers in large numbers, the needs of the Territory in respect to the numbers, nationality, and kinds of immigrants desired reflect to a large extent the needs of those two industries. At the present time there is, outside of the sugar and

rice industries, very little room for the employment of unskilled laborers. In time to come other industries may be established which may employ a number of laborers, but there is now a necessity for only such class of laborers as can be utilized in the cane and rice fields and in other branches of the sugar business.

The conditions which exist here render it imperative for the preservation of the industries established that laborers be brought from abroad.

Most tropical sugar-growing countries either possess an indigenous laboring population, available for the cultivation of sugar cane, or have within easy reach people who are readily obtainable for tropical field work, and whose physique and constitution enable them to undertake such field work without fear of injury to their health.

There is not such an indigenous population here to supply the demands; and the tendency of the native population is not toward field work. They make good mechanics, and a portion of these are engaged in a variety of trades, but agricultural labor appears to be distasteful to them, and the number employed on sugar estates is small. This being so, it has for many years been necessary to promote immigration of field laborers to the islands, and many countries have been drawn from. There has been regularly conducted emigration from Germany, Norway and Sweden. Azores, Madeira, Portugal, Galicia, China, Japan, and Porto Rico, besides which British, Americans, Italians, and negroes (from the United States) have come in small numbers.

Under the laws of the Kingdom and later of the Republic of Hawaii, immigration from European countries was assisted by the government and industrial interests of Hawaii. Since annexation to the United States it has entirely ceased, as assisted immigration is prohibited by the United States immigration laws, and it is quite impossible to direct a voluntary immigration from Europe direct to Hawaii, the great distance and expense of transportation being insurmountable obstacles in the way of such voluntary immigration.

So far as the Europeans and Americans are concerned, it has, with one exception, been found that they were unfitted for tropical field work; they could not and would not perform it, and never for long labored as "field hands." The one exception noted is that of the Portuguese from Madeira and the Azores, who showed themselves capable of performing good field work. The improved condition of their own countries no longer necessitating emigration, these people show no disposition now to come to the islands, and even if they were willing to emigrate to Hawaii the laws of the United States would hinder them from receiving that assistance without which emigration would be for them impossible. And here it may be stated that if other Europeans can be found who could endure labor in the cane fields of Hawaii, the immigration laws would render them unable. The geographical position of these islands and the great distances which such emigrants would have to travel would necessitate their being assisted in ways which are prohibited by the laws, as they can not themselves meet the cost. Of the Portuguese who originally came to Hawaii as assisted emigrants, those who did not go to the mainland have so prospered that now they do not engage to any large extent as plantation laborers, and their children, by the aid of the excellent Hawaiian free-school system, have fitted themselves for more congenial occupation than field labor affords.

It has sometimes been argued that the Hawaiian sugar industry is in exactly the same position as that of the Southern States, and that if the latter can supply their labor needs, Hawaii should be able to do the same. This, however, is wholly misleading and untrue. If Hawaii had a large indigenous population such as exists in the Southern States, and if Hawaii could draw upon the large streams of immigration entering the United States, from which to supply its requirements, as does that section, then such a comparison might be made. If there were no indigenous population upon which the Southern States could draw to supply the labor required in the fields, and were they wholly dependent upon Italian and other European immigration for labor, they would stand in relation to Europe geographically as does Hawaii in relation to Asia. Furthermore, while there is a stream of Italian and European immigration from which the Southern States can supply their needs, the great distance to Hawaii, coupled with the rigorous laws against assisted immigration makes it impossible for Hawaii to hope for relief from that source, even if such immigrants could stand the climate, which is far more trying than is that of the South. It must be remembered that the Hawaiian Islands are situate south of the Tropic of Cancer between the nineteenth and twenty-first degrees of longitude, consequently on or about the same level with, for instance, Vera Cruz, Manzanillo, Hongkong, Bombay and Burmah, Cuba, Formosa, and Mexico City.

The impossibility of securing a sufficient supply of Hawaiian or other laborers able to endure the work in cane fields forced the planters of these islands into a reliance on China and Japan for the necessary supply. The Chinese have always proved themselves to be a law-abiding, docile, and industrious people, but the United States exclusion laws shut out this nationality from Hawaii as soon as annexation became an accomplished fact, and the only present practicable source of supply is Japan, though a small number have come from Korea.

Since the annexation of these islands the difficulty of maintaining an adequate supply of agricultural field laborers has been very great. Chinese are absolutely prohibited, and while the Japanese still come, the number of immigrant laborers hardly balances the number of Chinese and Japanese who return monthly to their homes, and the scarcity of labor has enhanced its value.

There exists in the minds of some, who are unfamiliar with the nature of field work in a tropical cane field, the impression that white men can perform the work, and that the proper way to conduct a sugar plantation is to divide the land into small lots and give them to white men to cultivate instead of doing the work of cultivation by day laborers working for a wage under one controlling management.

A list of the nationalities that have tried field work in Hawaii has already been given. To-day there are no white men laboring in cane fields here. Those who have tried it have never stayed by it for any length of time, and abundant evidence is forthcoming that the white man can not and will not stand the work of tropical cane fields.

Some little time ago the management of the Ewa plantation, on the island of Oahu, decided to experiment with American farmers. Fifteen families of highly respectable people were carefully selected in the Western States, and all their expenses paid to the plantation, where houses had been erected for them, each with a garden patch surrounding it, and where a large patch of "common land" had been set apart

for their use as pasture for such stock as they desired to keep. Here they were given lots to cultivate in cane, and every help was rendered in the way of plowing and preparing their fields, but notwithstanding this and all the Ewa Plantation Company expended on this effort to raise cane by white farmers, these people were not able to perform the necessary labor, and they drifted away by degrees, so that in about a year none of the fifteen families was left. Other experiments of a similar nature have been made with like results.

In connection with the question of "homesteading" and of encouraging small farming, it is proper here to point out that all the lands cultivated by plantation companies, who find it necessary to irrigate because of the uncertainty of the rainfall, were either arid wastes or poor pasture lands before they were acquired by these companies, who sank artesian wells, established expensive pumping plants, or constructed extensive water ditches and pipe lines, and at great cost poured water over the lands and made agriculture thereon a possibility. If development by homesteads only had been possible the lands which are now cane fields would be in their primitive condition, because their irrigation was only rendered possible by the investment of a large amount of capital.

With the largely increased world production of sugar, it is only with difficulty that cane can be grown here with a profit. The remoteness of these islands from the world's market and the cost of production are factors to be contended with.

It would be of great advantage to the agricultural interests of these islands if the United States immigration laws could be so amended as to permit the assisting of a desirable class of Portuguese laborers from the Azores or neighboring islands, or if there could be a modification of the Chinese exclusion act permitting the immigration to these islands of a limited number of Chinese agricultural laborers, such laborers to be restricted to agricultural labor and domestic service, and strictly prohibited from engaging in mechanical and mercantile pursuits; such immigration to be so regulated that the identity of each laborer may be ascertained and a record kept thereof, and that he may be required at the end of from three to five years from the date of his arrival in these islands to depart therefrom, and that such laborer be not permitted to go from these islands to the mainland. The organic act takes care of this now. No Chinese can go to the mainland from Hawaii.

Under the existing laws of immigration it is impossible for Hawaii to get immigrant classes from Europe or other occidental countries. Hawaii is 5,000 miles from the point where the great numbers of immigrants land in the United States. Hawaiian interests have tried the experiment of bringing immigrants from Atlantic ports of the United States to Hawaii, and have failed. We are therefore forced to take immigrants from the Orient or go without, and to go without means the ruin of Hawaiian industries, a condition that the Congress of the United States can not afford to permit, much less to exist, as it certainly would be making a failure of the industrial situation in Hawaii by the continued application of such a drastic measure. No class of American citizens would be injured by the special legislation above referred to, permitting a restricted immigration of field laborers from China; on the contrary, the interests of all Hawaiian citizens and producers as well as of the planters themselves would be furthered

by such legislation. The population thus created would increase the Hawaiian market for American products and be for the direct interests of workmen on the Pacific coast and in all industries supplying goods to the Territory, while it would not be a competing element upon the mainland.

By the acquisition of distant territory in the Pacific Ocean the domain of the United States is extended in such a degree that in making laws existing conditions should be recognized. In matters of immigration, the restrictions which are required for the protection of the mainland may be very injurious for distant possessions, and a distinction should be made by special legislation so that classes not desired on the mainland can be excluded, and the distant possessions provided for as their needs may require.

GENERAL FINANCES.

The finances of the Territory of Hawaii are in better shape to-day than they have been since the date of annexation by the United States. Prior to that time these islands were in receipt of an annual revenue approximating \$3,000,000. The diversion of the customs and postal revenues caused a material reduction. Notwithstanding this loss the expenses of the Territory were maintained upon their former basis. There had been no reduction in the number of employees or the current expense in any single department, and in many cases the functions of various departments had been extended. In an effort to supply this deficiency an income tax had been passed and every source of revenue had been closely scrutinized, the assessed values of all properties raised, and the whole system of direct taxation largely increased. Still this was insufficient to meet the requirements, and, of late, each year brought deficiencies which were met by anticipating the income. Such a condition of affairs could not be maintained, and it necessitated a special session of the legislature in the spring of 1904. This session lasted only twelve days, and it did most effective work in reducing the amount of expenditures that had been previously authorized and in curtailing the departments in every direction. The result is that, beginning with the 1st day of July, 1904, the appropriations for the year ending June 30, 1905, will be slightly under \$2,000,000, while a conservative estimate of the Territory's revenue for the same period is some \$200,000 in excess.

As the Territory is unable to borrow money to cover any temporary deficit it must pay cash as it goes, or issue warrants, to be redeemed as the income is collected, for bonds can only be issued, as provided by the organic act, for certain public improvements, with the approval of the President.

Notwithstanding the fact that the large collection of taxes in November last year had been exhausted by January of this year and the issuing of warrants has been continued from that time, the expenditures have now been so reduced that by November next every outstanding warrant will be paid and a considerable balance of excess applied toward the deficiencies of the previous years. Thus, in the coming year, it will not be necessary to issue so large an amount of warrants, and gradually the Territory will be reestablished on an absolutely cash basis.

At the present time the total bonded indebtedness of the Territory does not exceed $2\frac{1}{2}$ per cent of the taxable property of the Territory, and by reference to the article following on this same subject by the treasurer of the Territory will be found a detailed statement of the bonded debt.

CHINESE FUND.

In the last annual report of the governor of the Territory some mention was made in reference to this matter, and it was shown that in the changes brought about by annexation and the abrogation by Congress of all laws relating to Chinese immigration the matter of the disposal of this fund was left unprovided for and necessitated local legislation. An act "to provide for the care, custody, control, and payment of \$155,546.70, being the money now in the possession of the treasurer of the Territory designated and known as the 'Chinese fund,'" passed the legislature and was approved April 28, 1903.

By June 30, 1903, there had been paid to the claimants in accordance with this act.....	\$89,968.30
During the present fiscal year, ending June 30, 1904, there has been paid.....	56,179.75

A total of.....	146,148.05
Leaving an unpaid balance of.....	19,389.65

But in order that a full understanding in reference to this matter may be gained, it is necessary to consider the fund before the passage of the aforesaid act.

Prior to annexation, the Republic of Hawaii maintained and operated a postal savings bank. There was also in existence a board of immigration, with a paid secretary, who received the payments made by the Chinese laborers who had been admitted under the provisions of previously existing laws, by which they were required to work as agricultural laborers, mill hands, or domestic servants, and to pay a part of their wages to the Government toward a fund to be used in sending them out of the country whenever they should cease so to work. This fund was deposited in the postal savings bank to the credit of the board of immigration, in a separate account with each laborer.

Congress in its act to organize this Territory abolished the board of immigration and the postal savings bank, making provision, however, for the payment of all deposits therein. As these accounts were made up and closed, there being no law for the custody and control of this fund, the money was turned over to Mr. Wray Taylor, the former secretary of the board of immigration, and then employed by the Territory as commissioner of agriculture and forestry, who, from his intimate knowledge of the records and affairs of the board of immigration, was expected to pay out the money as it was called for by the claimants. Part of this money was deposited in the First National Bank and part was placed in a separate compartment in the vaults of the treasury.

In September, 1902, former treasurer of the Territory, W. H. Wright, absconded, and it was found he had taken considerable money from this Chinese fund. In December, 1902, Mr. Taylor left the country for a short vacation and, not returning, it was found that he also was short in his accounts with the Chinese fund.

From the meager records and inadequate books kept by Mr. Taylor, the best estimate that can be made is as follows:

In February, 1903, the unpaid claims amounted to.....	\$173, 481. 25
Wright's shortage	\$16, 883. 05
Taylor's shortage.....	1, 051. 50
Total	17, 934. 55
Balance in the treasury vaults and in the bank of.....	191, 415. 80

mentioned in the act passed by the Territorial legislature.

Thus no provision has yet been made covering the shortages, the matter being left open to ascertain to what extent the pass books of the laborers had been lost or destroyed and the claimants themselves have disappeared.

FIRE CLAIMS.

The court of claims final awards for the fire originated during the epidemic of bubonic plague amounted to \$1,473,173.

The legislature of 1901 recognized the entire inability of the Territory to meet these claims, yet as an earnest of good faith it made an appropriation of \$1,500,000 from moneys not otherwise appropriated and provided that the moneys from the United States Government as refund of interest on the \$4,000,000 of bonds assumed at the time of annexation should at least be applied to the payment of these claims.

Not long after \$140,000 was received from the United States Government in part payment of the interest advanced by the Territory. In order to make an even 10 per cent payment on the total claims there was taken from the Treasury an additional \$7,317.30. Thus at the time the matter was taken before Congress there was a balance unpaid of \$1,325,855.70.

By act of Congress, approved January 26, 1903, provision was made for the payment from the Federal Treasury of \$1,000,000, and the Territorial treasurer was authorized to issue 5 per cent fire-claim bonds for the payment of the remaining \$325,855.70.

Cash statement, fire claims.

1903.

Accrued interest.....	\$140, 000. 00
Transfer of cash from treasury.....	7, 317. 30
Cash received from sale of 162 fire-claim bonds at par.....	162, 000. 00
Total cash received to June 30, 1903	\$309, 317. 30
Warrants paid by treasurer to June 30, 1903.....	304, 584. 57
Balance cash on hand July 1, 1903.....	4, 732. 73

1904.

Received from sale of 153 bonds at par to June 30, 1904....	\$153, 000. 00
Received refund of interest from United States Government	11, 589. 83
Total receipts to June 30, 1904.....	169, 322. 56
Warrants paid to June 30, 1904.....	155, 139. 60
Cash balance July 1, 1904.....	14, 182. 96
Outstanding unpaid claims.....	13, 448. 83

Thus there is now an excess of cash in this fund of \$734.13, and there are 11 bonds unsold in the hands of the secretary of the Territory out of the issue of \$326,000 authorized. When the suits pending are disposed of a final settlement can be made and the whole matter closed.

EMBEZZLEMENT.

Shortly after the present administration was inaugurated, and partly due to the consequent changes, several embezzlements by public officials were discovered by the new heads of departments, a detailed statement of which can be found in the descriptive article on the auditor's department by J. H. Fisher.

In every case the employees were at once submitted to a searching examination and immediately put under arrest.

The laws of the Territory regarding embezzlement have not been clear. At the special session of the legislature this was corrected, but, as no law can be retroactive, it is doubtful in some cases whether convictions can be secured.

At present bonds have, in some instances, been required by the heads of departments without any law of authorization, and it is hoped that the next session of the legislature will remedy this by passing an act requiring bonds to be furnished by all officials, high or low, that have the handling of any of the Territory's funds.

INTERNAL-REVENUE MATTERS.

Through the courtesy of Mr. Roy H. Chamberlain, collector of internal revenue, I am enabled to present the following statement of receipts and disbursements of the office of internal revenue in the district of Hawaii during the fiscal year ending June 30, 1904:

Receipt from various sources.

Collections on lists.....	\$2, 846. 34
Fermented liquors.....	14, 470. 00
Distilled liquors (tax paid).....	5, 177. 72
Cigars and cigarettes.....	860. 02
Tobacco and snuff.....	2, 873. 94
Special taxes.....	17, 756. 78
Playing cards (tax paid).....	642. 90
Documentary stamps (post-stamping documents).....	5. 12
Total receipts.....	44, 632. 82

ADDENDA.

Source of "Special tax" collections, as above, and number of special-tax payers:

Rectifiers of not less than 500 barrels per annum.....	3
Retail liquor dealers.....	452
Wholesale liquor dealers.....	47
Brewers of 500 barrels or more per annum.....	1
Wholesale dealers in malt liquors.....	19
Retail dealers in malt liquors.....	61
Wholesale dealers in colored oleomargarine.....	2
Manufacturers of cigars.....	1
Manufacturers of playing cards.....	1

Total special-tax payers..... 587

No special tax is required to be paid by manufacturers of cigars or playing cards, but they are required to register with this department

and do business under its surveillance, stamping their products according to law. Total disbursements, including salaries and incidental expenses, \$10,810.07.

INTERNAL IMPROVEMENTS.

Mr. C. S. Holloway, whose article on the public works department is presented herewith, not only describes the department, but gives a detailed account of the work of this nature done within the Territory.

LIGHT-HOUSES.

Notwithstanding the fact that on January 1 the Federal Government, through the Department of Commerce and Labor, took over the nineteen light-houses which had been maintained since annexation by the Territorial government, as yet there has been little or nothing done to improve the service and the light-houses themselves are in much the same condition as at the beginning of the year in regard to repairs and improvements.

A proclamation was issued by the President, taking over the sites of all such light-houses as were located on Government property, but the service is hampered from the fact that under the law no repairs can be made until the title of the land has been passed upon by the Attorney-General of the United States. In order to submit these titles to the Department of Justice, it is necessary to have abstracts made, and it is stated that the Light-House Board has no funds available for this purpose.

The service was never up to the standard of the United States, and although the Territory readily turned over to Commander Niblack, of the United States Navy, in charge of the light-house service on these islands, all the data that it had, yet there were no archives, books, drawings, documents, or models, as the lights had been added to from time to time by appropriations from the local legislature, and such alterations and repairs had been made as were found necessary.

It is understood that an invoice of modern lenses and lamps has been received, and a shipment of buoys is en route, so that some improvements are anticipated in the aids to navigation.

It is highly essential that those who are responsible for this service should realize that the methods applicable to long-established light-house districts on the mainland are entirely inadequate and inapplicable to the present conditions here. An appropriation of \$300,000 should be immediately available for this district; another \$30,000 should be added for the maintenance of the service. A light-house tender is absolutely essential for the service, and would be economy for the Federal Government.

The needs of this service are very great. The Builders and Traders' Exchange, of Honolulu, in a petition to the Territory's Delegate to Congress last September, stated that the light-houses in the Honolulu entrance channel are not of a standard required by the importance of trans-Pacific commerce.

The Hilo Board of Trade requests that \$10,000 be appropriated for the erection of a light-house at Leleiwi Point, and their communication, which is published in the Appendix, gives many strong reasons for such appropriation.

The Wailuku Improvement Association asks that suitable lights be erected at certain points on the coasts of Maui, Molokai and Lanai. It also urges the immediate reconstruction of the Lahaina light, in order that it may not be confused with other lights in that vicinity, all of which appears more fully in the association's communication which will be found in the Appendix. Patriotic Americans traversing the Pacific can not yet take pride in this service.

PUBLIC BUILDINGS.

Of the public buildings owned by the Federal Government all, with but few exceptions, were taken over from the Territory at the time of annexation.

The custom-house, located at the wharf, is a coral and stone building which is not adequate for the increased service of that department.

The post-office is a concrete building fairly well located in the center of town, but poorly arranged, and it should be supplanted by a much larger building.

No provision was ever made for the accommodation of the Federal courts, and they are now occupying part of the Territory's judiciary building, without any return to the Territory, and the space can ill be spared.

The internal-revenue department occupies, at the pleasure of the Territory and without compensation, a portion of the basement of the executive building.

ARMY BUILDINGS.

The Engineer Corps stationed here by the War Department occupies a number of wooden sheds hastily erected at the time of the Spanish war, which would do more credit to a stock yard than the housing of Federal troops.

NAVY BUILDINGS.

The buildings erected by the Navy Department consist of a small wooden office building and the coal sheds. The recent arrival of Marine Corps necessitated the removal of the coal in order to provide for the men in the sheds.

TERRITORIAL BUILDINGS.

The Territorial buildings consist of an executive building, which is used as a legislative hall and for administration purposes. It is not well arranged for the latter. The judiciary building provides for the judicial department, the Federal courts, as well as some of the administrative departments, such as the tax office, recorder's office, and the board of education. This building is very badly in need of repair and is very much overcrowded.

Few public buildings exist on the other islands other than schools and court-houses.

PRIVATE BUILDINGS.

Within the last few years there have been many substantial buildings erected in Honolulu, and in no other phase has the progress since annexation been more marked.

The largest and most pretentious is that of the Alexander Young Hotel, a structure covering 42,320 square feet, six and eight stories, said to have cost \$1,500,000.

Hackfeld & Co., sugar factors, completed in 1902 their magnificent new office building, costing over \$250,000.

The "Boston Building," containing offices, was finished in 1901, at an expenditure of nearly \$100,000, without estimating the value of the land.

The "McIntyre Building," containing the First National Bank, cost in construction over \$56,000.

Lewers & Cooke, lumber dealers, built their new office building in the latter part of 1901, at a total outlay of \$130,000.

The Odd Fellows' new building has just been completed at a construction outlay of \$75,000.

FISHERIES.

As far back as 1839, at the time when all the lands and appurtenances were the absolute possession of the monarch, Kamehameha II issued a proclamation, which had the effect of law, giving to the chiefs, who held for him large tracts of land, fishing rights adjoining their lands and running sometimes for a space of 3 miles into the ocean.

At the great division of lands in the latter forties, a land commission was appointed to examine into the titles and carry out the division between the monarch, the chiefs, and the common people. This land commission recognized the fishing rights, and the various legislatures from time to time have enacted laws recognizing the right of the owner of the land to these fishing privileges, of which there are two classes—first, those which are described by metes and bounds in land awards, and secondly, those whose boundaries have been handed down by tradition from time immemorial. Thus the waters surrounding these islands have at no time in the past been free.

By reference to the article on the attorney-general's department it will be noted that Congress abrogated all exclusive fishing rights; but in order to protect vested rights, if any existed, provided that all claims must be filed within two years, and that they should be adjudicated in the courts of this Territory, and if it should be proven they were vested rights, then the Territory must proceed to condemn and pay, from money not otherwise appropriated, for such fisheries, so that the same may be free to the public.

Owing to the high price and large consumption of fish by the people of these islands these rights are of great value; in some instances they are of more value than the land itself. There are at least 150 fishing privileges in the Territory, including almost all the waters surrounding the islands, while but 82 claims have been filed within the two years allowed by the organic act.

The matter was taken to the supreme court of the Territory, which decided that as these rights were granted by a general act of the legislature they were merely privileges and could be set aside by any future general act, and thus the claimants had no vested rights in the fisheries. The claimants, however, were not satisfied, and a case where there was an award granting fishing rights by metes and bounds was appealed to the Supreme Court of the United States, which in May of this year rendered a decision reversing the Territorial supreme court and uphold-

ing the theory of vested right. During argument it was admitted by the court that it was doubtful whether Congress had the authority to place a limit upon the time wherein claimants must bring suit or lose their vested right. Since this decision not only the successful appellant, but probably others have taken possession of their rights and prohibited general fishing within their bounds, the Territory being, of course, helpless in the matter.

The Territorial officials are proceeding to bring all of these claims to trial to ascertain whether the claimants can prove their right to the fishing privileges by competent evidence and, upon such claim being proved, to bring condemnation proceedings as required by the organic act.

The Territory, however, is absolutely unable to meet the payment of these claims as prescribed by Congress. There is already a deficiency, and it is impossible to say when there will be funds unappropriated. In the meantime, however, these private owners, owing to the result of the litigation, will undoubtedly keep possession of their fishing privileges, and, if it is desired by Congress that they should be free to all, it seems impossible to accomplish this without the payment by the Federal Government of the value of these claims.

IMMEDIATE LEGISLATION.

There has been no amendment to the organic act since it was passed in 1900, while by reference to acts creating other Territories it will be seen that Congress has ever been willing to make such amendments as changed conditions require.

In order to obtain as widespread an expression of opinion as possible on the new legislation needed, requests were sent out to various commercial bodies of the Territory, the responses to which are of interest and are found in full in the Appendix.

A. Chamber of Commerce, Honolulu.

B. Chamber of Commerce, Honolulu.

C. Merchants' Association, Honolulu.

D. Board of Trade, Hilo.

E. Improvement Association, Wailuku, Maui.

First. By far the most important question which concerns the future of these islands is the need of some modification of the immigration laws in order to provide labor to develop the resources of this Territory to the fullest extent. By reference, the article on sugar, with the remarks on labor conditions which precede, make it evident that unless some modification can be obtained, the progress of these islands will be checked. Notwithstanding the large number of Orientals that compose our population, it is evident from the school statistics that we are not being Asiaticized. The conditions here differ entirely from those which affect the Atlantic seaboard, and provision for a limited number of Orientals to work in the cane and rice fields of these islands need not necessarily antagonize those who believe in restricted immigration. The immigration laws in reference to the entrance of Chinese are already in force in these islands, and those here are not allowed to enter the ports of the Pacific coast. Thus provision could easily be made for a limited number under restrictions requiring their return at the end of a given number of years and confining them entirely to these islands.

Second. Next in point of importance is the removal of the restriction in the leasing of agricultural lands. At present the Territory can lease no agricultural lands for more than five years, while certain crops, such as sisal (a description of which appears in the following pages), takes four years to mature its first crop, and it is impossible to expect anyone to undertake such a venture on leased lands, with the prospect of having the result of four years out of five of his labor sold at public auction.

If Congress is unwilling to modify this, the only other course to pursue to increase the wealth of these islands is to sell the land outright and cease the leasing of it, which would enable a man with small capital to undertake enterprises which would otherwise be prohibited, and at the same time render the Territory much needed revenue in addition to its taxes.

Third. Section 80 of the organic act should be amended so that the governor may remove any officer appointed by him. This is a question of practical administration. The responsibility for a high standard of efficiency in the Territory is placed entirely upon the executive, and yet, under the organic act, he can not remove a prison inspector or the head of a department whose usefulness has ceased. To meet this situation precedents have now to be established of requiring resignations in advance, which can not be considered satisfactory.

Fourth. The return by Congress of the armory site for Territorial use.

Prior to annexation there existed a national guard of Hawaii, which had a rough armory building located on a piece of Government property just in the rear of the executive building—an ideal site, as its proximity rendered the guard of great assistance in case of insurrection or riot. At the time of annexation, owing to the needs of the War Department during the Spanish war, this site, with the buildings thereon, was taken by the War Department as an army reservation, part of which has since been used by the Quartermaster's Department.

It would greatly assist in fostering the national guard in Hawaii if this site could be turned over to the Territorial government for the erection of an armory and as a parade ground for the guard. There is available an appropriation by the Territory of \$75,000 for such a building. If favorable action can be taken by Congress on this matter early in its session this appropriation would still be available and it would be in conformity with the active interest the Federal Government is taking in raising the standard of the National Guard throughout the Union.

Fifth. That the organic act be so amended as to limit the session of the legislature to forty days, and provide at the same time for a yearly session; also requiring that each session of the legislature should make public a statement of its expenditures, and that the treasurer of the Territory be prohibited from paying out any money without proper and sufficient vouchers.

In accordance with the foregoing, amendment should be made to provide for annual rather than biennial appropriations. This change would give the people more of an opportunity to keep pace with the rapid changes that are taking place; would make for keener interest in local affairs, and in the end for a higher standard of citizenship. It would make the Government more elastic, and as the members would be elected for two years, every alternate year the session would

be composed of precisely the same members as at the preceding session. This would be wholesome in its effect, and result in legislation of a much higher class.

NEEDED APPROPRIATIONS.

First. Immediate provision should be made by Congress for the dredging of the harbor of Honolulu.

By reference to the article on commerce it will be seen that Honolulu stands well up among the ports of the United States of America in point of revenues collected and tonnage. Not only the future of the Territory but that of the whole Union will be affected by our commercial supremacy in the Pacific. This is not a case of dredging a harbor that is annually filled up with silt, but only that of increasing the depth to keep pace with the increased draft and length of the steamers crossing the Pacific. Since annexation the Territory, at its own expense, has dredged the harbor, and only last year cut the bar at the entrance to the harbor to a depth of 35 feet, and thus made provision for all vessels up to that time. Since then the Pacific Mail Company has put on its new boats, the *Mongolia* and *Manchuria*, which it now finds impossible to bring into the harbor. The delay and increased expense of lightering is a heavy tax on commerce, and it would seem as if this appropriation should be made in the interest of the through commerce that passes our doors.

Second. An appropriation should be made by Congress refunding to the Territory the following sums expended between June 14, 1900, and June 30, 1904, as shown by the books of the department of public works:

Harbor improvements and buoys.....	\$11,481.77
Light-houses, maintenance and repairs.....	31,939.99
Dredging Honolulu Bar and Harbor, exclusive of slips.....	131,800.31

Thus \$175,222.07 was expended by the Territory in the maintenance of a service which no other community in the Union has ever been expected to bear by direct taxation. The dredging of Honolulu Harbor was felt to be of vital necessity, and the maintenance of the light-houses was simply from the fact that the people of this Territory when told that Congress had made no provision for this service were humane enough to desire to protect the lives and property not only of American bottoms, but in the vessels of all nations of the world.

Third. Provision should be made for the erection of a suitable public building in Honolulu for a Federal court, internal-revenue office, and post-office. Failing such appropriation, some provision should be made to pay rent to the Territory for the space now occupied in its buildings by the Federal departments, as is done in other Territories.

Fourth. Provision should also be made for the erection of a suitable public building in Hilo, where the post-office, court-house, and internal-revenue office can be located together.

Fifth. For the making of a survey in anticipation of the construction of a breakwater at Hilo I recommend the appropriation of \$10,000.

Sixth. No greater good can be accomplished by Congress in any appropriation that is made by the Federal Government than to provide a fund of \$50,000, under the United States Marine-Hospital Service, for the study of and experiments in obtaining a cure for leprosy. From the beginning mankind has been cursed with this disease, which

has baffled all science, and is found not only in the Philippines, Porto Rico, and Hawaii, but in many of the States and cities of the mainland. Were such an attempt successful, not only would great credit accrue to the American people, but suffering and sorrow would be relieved throughout the world to an extent little realized.

Very respectfully,

G. R. CARTER,

Governor of the Territory of Hawaii.

The Honorable the SECRETARY OF THE INTERIOR.

DESCRIPTIONS AND REPORTS OF THE VARIOUS DEPARTMENTS OF THE GOVERNMENT OF HAWAII.

HEALTH CONDITIONS OF THE TERRITORY OF HAWAII.

By L. E. PINKHAM.

HEALTH AND TRANS-PACIFIC COMMERCE.

The Hawaiian Islands, particularly the island of Oahu and the port of Honolulu, occupy an unparalleled position as to the commerce and travel of the world. Through the single port of Honolulu, the only safe and available harbor in mid-Pacific, passes an enormous and rapidly increasing trans-Pacific commerce—not only oriental and colonial travel, but the ever-growing number of “around the world” travelers. The stay of these great steamers in port is short, but long enough to impose upon the Territorial government an unusual responsibility for not only local health, but that under no circumstances shall Honolulu become a mid-ocean center for the reception or dissemination of contagious or epidemic diseases.

The United States quarantine service is ever vigilant and effective, and is provided with excellent facilities, soon to be so improved as to be unexcelled anywhere. Passengers and employees, when once permitted to land, are subject to the care of local police and health authorities, so both the Federal and Territorial authorities have intimately related responsibilities.

No winter ever aids in stamping out disease. A never-ending summer renders our freedom from disease purely a matter of the continual application of sanitary and hygienic measures, at never-ending expense, vigilance, and responsibility.

It is only just that the legislative and executive powers of the United States Federal Government should recognize these facts and realize that this little community is meeting a burden and responsibility which no other place of its size in the world is called upon to face.

CONSISTENCE AND APPOINTMENTS.

The board of health for the Territory of Hawaii consists of seven members, four of whom are laymen, two physicians, and the attorney-general ex officio. The members of the said board are appointed by the governor, who also appoints the president, with the advice and consent of the senate of the Territory of Hawaii, and are commissioned for two years. All of the members of the said board serve without pay, except the president, whose salary is provided by the legislature. The president presides at the meetings of the board. In case of his

absence any member of the board may be chosen to preside over the meetings of the board. The board appoints its secretary, agents, and physicians, who receive such compensation for their services as is provided by the legislature.

The personnel of the board of health, as at present constituted, is: Chas. B. Cooper, M. D., W. H. Mays, M. D., L. Andrews, esq., attorney-general, M. P. Robinson, esq., F. C. Smith, esq., J. C. Lane, esq., L. E. Pinkham, esq., president.

DUTIES OF THE BOARD OF HEALTH.

The board has general charge, oversight, and care of public health, with the power of making such regulations respecting nuisances, sources of filth, causes of sickness, and interment of the dead as it shall judge necessary for the public health and safety.

The board is required to make, through its president, an annual report to the governor.

SCOPE OF THE BOARD.

The jurisdiction of the board of health is for the entire Territory of Hawaii, including segregation of lepers and the maintenance of the leper settlement on the island of Molokai.

GENERAL HEALTH.

The general health of the Territory for the past year has been good, there having occurred 2,654 deaths from a population of 154,001, an annual death rate of 17.55 per 1,000 inhabitants.

CARE OF THE INDIGENT SICK.

The indigent sick are cared for in the Queen's Hospital, Leahi Home for Incurables, and the Kapiolani Maternity Home, all quasi-public institutions. The financial reports of at least two of these institutions show that they have been an aid to the government in its duties to the indigent sick, and it is probable this same fact will continue, with decreased appropriations, revenues, and expense.

In eighteen months the Queen's Hospital has had an average of 76 indigent patients in its care at the beginning of each month. A new three-story brick building, with all modern improvements, will add greatly to the usefulness of this institution when completed.

In eighteen months the Leahi Home has had an average of 24 indigent patients in its care at the beginning of each month. This is a most desirable institution, and is remarkably situated, in a climatic sense, for incurables. It is believed its dry climate, perpetual summer, and protected situation render the cure of some cases of consumption possible. As nearly all of the cases are absolutely destitute of means, when recovery has proceeded so far they can no longer remain a public charge, they return to low and unfit nutrition, come back, and finally succumb to the disease.

Although the legislature provided a new dispensary, no means were furnished with which to run it. However, generous physicians tendered their free services and charitable citizens contributed funds,

so the benefits of the free dispensary are available to all the poor. Numerous and daily calls are made on its resources. Its office is open morning and afternoon.

INSANE ASYLUM.

The number of the insane has slightly increased during the year, being 177 against 166 a year ago. It is well to remark here that the outdoor life, uninterrupted through the year, and mild relaxing climate pertaining to our islands, affects the insane in a marked degree, rendering them remarkably more tractable and less violent than in a more rigorous climate. Of the several new buildings provided for in the loan act, the executive building has been completed. The large dormitories are designed by the architects to be of superior sanitary construction and to be practically fireproof. They will soon be under construction. Other improvements are completed or contemplated.

LEPROSY.

A spirit of contentment has prevailed over the settlement on Molokai during the past year, which it is hoped may continue for a long period. There have been no incidents that require comment. The particular effort of the year has been that of Dr. C. B. Cooper, as representative of the board of health, to bring the subject of the scientific study and treatment of leprosy for the benefit of the lepers of Hawaii forcibly to the attention of the United States Public Health and Marine-Hospital Service at the annual conference at Washington June 3, 1904. Doctor Cooper was chairman of the committee on leprosy. This effort was supplemented by the presentation of the subject to the American Medical Association at its annual meeting at Atlantic City.

Dr. J. T. McDonald, bacteriologist and pathologist of the board of health, places upon record additional evidence in support of an opinion expressed by him that no patient be sent to a segregated leper colony until the bacillus of leprosy, the sine qua non of the disease, has been unmistakably demonstrated to be present in such patient beyond the shadow of a doubt. During the past year, of the 97 patients sent to Molokai he has shown the bacillus to be present in every case prior to the patients being officially declared lepers by the examining board. Many suspects bear such slight and uncertain evidence of the disease that it would be a manifest injustice to declare them lepers from an ocular inspection alone, without the crucial test of microscopical diagnosis. Such demonstration is by no means an easy matter in this class of cases, many of them demanding the most careful and repeated tests; but additional experience in the work crystallizes his former opinion into a settled conviction that if a patient really has the disease, of whatever type, the skin, at least in some slight degree and on some part of the body, will show a lesion in which the bacillus may assuredly be found.

That the United States Government owes certain financial relief in equity toward our leper charges is believed by many, and the board of health issued a booklet in support of the contention which is hereby reprinted for preservation:

*LEPROSY IN THE HAWAIIAN ISLANDS—ITS HUMANITARIAN AND FINANCIAL BURDEN—
AN UNPARALLELED INSTANCE OF PUBLIC PHILANTHROPY.*

[Issued by the board of health of the Territory of Hawaii. Honolulu, H. T. 1904.]

[SEAL.]

LEPER SETTLEMENT.

The leper settlement is at Kalaupapa and Kalawao, island of Molokai. Molokai is very sparsely populated, entirely to one side of the trans-Pacific and interisland travel, and travelers and tourists are not brought into contact or sight of these unfortunates, and are not allowed to visit the settlement.

HAWAII'S REQUEST.

The citizens and officials of the Territory of Hawaii believe the financial burden of leprosy, and the fact that the United States Treasury is unduly profiting from these islands, justify them in asking—

First. Aid in the scientific study and treatment of leprosy, now beyond our means.

Second. Some direct or indirect adjustment of the financial arrangements of the Territory of Hawaii with the Federal Treasury, so that our humanitarian obligations may be properly carried on without the present undue strain.

CARE OF LEPERS.

The lepers are segregated on the Island of Molokai, on a seagirt peninsula, containing 6,348 acres, of extraordinary scenic beauty, and shut out from communication with the outer world by practically impassable perpendicular cliffs, ranging from 2,000 to 4,000 feet high.

Communication by sea is under the exclusive control of the Territorial government.

The settlement is conducted on the lines of a very large and scattered village of private cottages and possessions for those physically able to maintain them. The cottages number over 450. There are hospitals for the helpless, and boys' and girls' homes. Churches, schools, and means of entertainment are provided. Athletic sports are common. Every possible means is used to remove the feeling arising from restraint. Medical attendance is constant. Members of both sexes of religious orders devote themselves to the care of these unfortunates. Every provision for support and comfort is made free of cost. No service is required of those able to work. Those working receive suitable money remuneration.

Leprosy in Hawaii, statistics as to nationalities affected, census of 1900 and 1904.

Race.	Popula- tion.	Lepers.	
		1900.	1904.
Native Hawaiian.....	37,635	951	764
Portuguese.....	15,675	10	17
English, German, etc.....	5,893	10	12
Americans.....	7,283	5	5
Negroes, Malay, etc.....	638	4	6
Chinese.....	25,762	34	47
Japanese.....	61,115	.....	5
Total.....	154,031	1,014	856

THE FINANCIAL BURDEN OF LEPROSY IN THE HAWAIIAN ISLANDS DISCLOSED BY
REPORTS OF THE BOARD OF HEALTH.

Expenditures of the board of health for the period of six years ending December 31, 1903.

Care of leprosy.....		\$876,888.86
Support, segregation, etc.....	\$840,688.86	
Transportation, administration, etc.....	36,200.00	
Ordinary expenditures.....		830,064.65
Administration.....	\$108,750.08	
Sanitation.....	182,961.99	
Quarantine service.....	35,042.29	
Government physicians and medicines.....	144,907.44	
Care of insane.....	187,507.55	
Hospitals.....	170,895.30	
Extraordinary expenditures (bubonic plague years, 1899-1900).....		625,000.00
Total.....		2,331,953.51

MOSQUITO CAMPAIGN.

While not a board of health matter, the chairmanship of the citizens' mosquito committee devolves on the president of the board of health. The work of the past year has fully demonstrated the possibility of mitigating to a great extent this personal annoyance and vicious disseminator of disease. It is hoped citizens of Honolulu will enable us to continue the campaign with even much more persistence, for there has been a marked decrease in the presence of mosquitoes.

GENERAL HEALTH.

The general health of the population throughout the islands for the past year has been good. The duty of the board of health is to conserve public health, and the gentlemen of the board who devote so much of their time to public service without compensation are deserving of public thanks and recognition.

EDUCATION AND THE PUBLIC SCHOOLS.

By A. T. ATKINSON.

Education at the Hawaiian Islands began with adults rather than with the children. Between the years of 1823 and 1827 a peculiar system of schools sprang up, which spread rapidly over the islands to the remotest villages and flourished for about ten years. The high chiefs, with their immediate attendants, were the first pupils. Each chief sent the most proficient scholars in his retinue to his different lands as teachers, with a notice to his tenants to attend school. The eagerness of the people to acquire the novel and wonderful arts of reading and writing was intense, and almost the whole population of both sexes and all ages went to school. These primitive schools at the time of their highest prosperity reached the number of 900, attended by 52,000 pupils, mostly adults.

The first school laws were enacted in 1841 by the King and chiefs in council. School agents for each island, with a general superintendent over the whole, were to be appointed by the King in council. The parents in each village were to elect a school committee, who were to act in conjunction with the school agent in regard to the appointment and support of teachers and the erection of schoolhouses. Teachers were required to have certificates from the school agent. No person born since 1820, who could not read and write, could hold any office or even get married. Attendance at school was made compulsory on all children between the ages of 4 and 14. This has since been amended by substituting 6 for 4 and 15 for 14 years.

With regard to the average knowledge among Hawaiian pupils as compared to elsewhere, it can be stated without contradiction that practically all Hawaiians under 50 years of age can read and write their own language and that nearly all Hawaiians under 20 years of age can read and write English, and the same may be stated of the Portuguese population.

It may be interesting to note that the number of children within school age attending school in 1880 was 70 per cent, in 1890 was 81 per cent, and in 1900 was 96 per cent. Of Hawaiians, 98 per cent attended school within school age; part Hawaiians, 99; Hawaiian born

foreigners, 94; Portuguese, 85; Japanese, 94; Chinese, 92; and of course all those who are American, British, French, and German extraction attended school. There are few places upon the face of the civilized globe where so many children of school age attended school for the full session of the year. Our year begins on September 1, and closes on June 30, and up to the present time, for a period of sixty-four years, there has never been a break in the constant continuation of the schools of the Hawaiian Islands, whether under the Monarchy, under the Independent Republic, or, at the present time, as a Territory of the United States. This is a record which is phenomenal, and greatly to the credit of the various administrations which have had charge of the board and later of the department.

On June 30, 1903, the total enrollment of all classes of schools in the Territory was 18,415. The close of the present period, June 30, 1904, shows an enrollment of 19,299. This is a gain of 884 pupils for the year. Of these, 10,457 were males and 8,842 were females. The enrollment of the public schools has advanced from 13,793 to 14,467, an increase of 674; that of the private schools from 4,622 to 4,832, an increase of 210. Last year there was an increase of 604 in the enrollment of the public schools and of 293 in the private schools. Thus the private schools have fallen off in comparison with the public schools.

There are in all 204 schools in the Territory, of which 147 are public schools supported by public money, and 57 are private schools supported by trust funds, rents, private contributions, and fees. At last report there were 144 public schools, which shows an increase of 3, while the private schools were listed at 59 and are now listed at 57. All the public schools of the Territory from the high school and normal down to the smallest country school are free and are open to all population, regardless of color or race. Every pupil who enters the Territorial public schools stands upon exactly the same plane. No race and no color is considered. The American, the European sits with the Malay, the Chinese, and the Japanese, and their amusements on the playgrounds are conducted upon the same level plane. The schools of the Territory are making the population come to a level. It is an amalgamation of races which probably is not seen in any place outside of Hawaii.

Of the teachers of the Territory in active employment during the last year, there were 646 as against 633 the previous year. Of these 189 were males and 457 were females. The public schools employ 399 teachers and the private schools 247 teachers. This gives an increase of 13 teachers in the public schools and no increase whatever in the private schools. This gives an average of 36 pupils to each public school teacher, and 19 pupils to every teacher in the private schools. The following table gives all statistics upon which this is based:

Number of schools, teachers, and pupils in the Territory of Hawaii.

	Schools.	Teachers.			Pupils.		
		Male.	Female.	Total.	Male.	Female.	Total.
Public schools.....	147	107	292	399	7,947	6,520	14,467
Private schools.....	57	82	165	247	2,510	2,322	4,832
Total	204	189	457	646	10,457	8,842	19,299

NATIONALITIES OF PUPILS.

It must be understood that in classing the nationalities of pupils or in dividing them by nationalities a very large number of them who are not so classed should be classed as Americans, it having been a custom in the islands to divide the population according to descent, even though the birth had occurred on the islands. Thus the third or fourth generation of British residents of the islands for that length of time are still classed as British, though the last generation occurring after annexation would make them American citizens. Of course, all Hawaiians and part Hawaiians are American citizens, and a very large number of the young Asiatics have the same claim.

There is a tendency to complain because Asiatics are educated in our public schools, and the complaint would be justifiable if we were educating those who were not, in the mass, to be voters in the future. The bulk of the Asiatics that are being educated in our public schools are those who will become voters in the future. It has been the aim of the department to get rid of such Asiatics in the schools as simply go there to learn English at an advanced age, say 16 to 17, and the success of the department in this direction has been satisfactory. In some cases teachers like to take in the elder Asiatics because they are very amiable and make good students, but this has been very sternly repressed. It is necessary that future voters should be educated and trained by American methods; otherwise they will be unable to vote intelligently. What we have to do here is what is being done on the mainland, and that is, assimilating a heterogeneous population and making Americans of them.

The number of Hawaiians of unmixed blood in the schools has remained practically stationary, though there is a slight decrease. In 1902 there were 4,903; in the report for 1903 the number was 4,893; the present year the number is 4,877, only a decrease of 26 during the two years. On the other hand, there has been a considerable increase in the number of part Hawaiians; that is, children whose parentage is partly Hawaiian and partly some other nationality. Last year they were reported as 3,018; this year they are reported as 3,234, an increase of 216. In course of time the Hawaiians of mixed blood will evidently equal, and perhaps even exceed, the Hawaiians of unmixed blood. Adding the part Hawaiians and the Hawaiians of unmixed blood together we have now in school 8,111 pupils of Hawaiian parentage, as against 7,911 in school in the year 1903.

The Portuguese children in school very nearly equal the number of Hawaiians of unmixed blood in school, the total number at present being 4,345. All the males of these have been born in the Territory and, as they become of age, will become voters. Last year there were 4,243 Portuguese children in school; thus the increase is 102 during the year. In 1880 there were 55 Portuguese, in 1890 there were 813, and in 1900 there were 3,829. In the course of the last four years there has been an increase of 534, and this in spite of the fact that a considerable number of Portuguese have left the Territory to go to the mainland. It does not, therefore, seem as if there was going to be much of a decrease in the Portuguese population.

There has been a considerable increase in the attendance of Japanese. Last year there were 2,521 in school, this year 2,920 are reported. This shows an advance of 399 during the year. The Chinese pupils have

only very slightly increased, the figures being 1,650 for the present year and 1,554 last year, making in all 96 increase. The total Asiatic pupils in our schools amount to 4,570. The total Hawaiians, Americans, and Europeans amount to 14,729.

If we take the matter up on different lines and eliminate all the pupils of Hawaiian blood, viz, 8,111, we have a residue of American and European blood 44 per cent in excess of those of Asiatic blood, and this with the Hawaiian blood gives an overwhelming majority against the Asiatic blood, with the other blood constantly becoming stronger. This Territory, as far as its school statistics show, is not becoming Asiaticized. The table annexed gives details of information.

Nationality of pupils attending schools in the Territory of Hawaii.

	Public.	Private.	Total.
Hawaiian	4,121	756	4,877
Part Hawaiian	2,253	981	3,234
American	560	317	877
British	129	76	205
German	167	154	321
Portuguese	2,937	1,408	4,345
Scandinavian	58	67	125
Japanese	2,483	437	2,920
Chinese	1,192	458	1,650
Porto Rican	446	110	556
Other foreigners.....	121	68	189
Total	14,467	4,832	19,299

TERRITORIAL TEACHERS.

The year ending June 30, 1904, shows that there were 646 teachers employed in the services of both public and private schools—this against 633 engaged in education in 1903. Of these, 399 are employed in the public schools and 247 in the private schools. According to the last report, 386 teachers were employed in the public schools, and this gives an increase of 13 for the public schools and no increase for the private schools. It may be well to point out that many of the teachers employed in the public schools are those who have been trained in our normal school, and that as time goes on it is the earnest desire of the department that all who are employed in public schools should come from the ranks of those who attended the Territorial schools. From the point of view of the department, those who have been educated in the schools in the Territory and who have thereafter, either by attending the normal school established in Honolulu or by attending other institutions of instruction upon the mainland, fitted themselves for positions in their own islands, are the persons who should take charge of our schools. It may be noted that the number of American teachers, which was 327 on June 30, 1903, is now 314. The explanation of this is that the young men and young women who have been educated in our schools have now reached a position in which they can take charge of very much more important institutions than they used to be able to do. This certainly shows the effect of the education that the department has been striving to give to the Territory. Thus it will be seen that in 1903 there were 78 Hawaiians of pure blood teaching school. To-day there are 83. At the same date there were 72 part Hawaiians and to-day there are 86, and this goes to show that the work of the department is being concentrated upon the people of the islands, and

that the people of the islands are responding to the effort that the department makes.

It is proper to say here that there is a regular system of certificates which are gained by examinations, and that we have a regular set of inspectors who view the work done by the teachers and who report weekly to the superintendent and board of commissioners.

The following table shows the number of teachers employed both in the public and private schools, and it can be noted that the department of education employs more Hawaiians, part Hawaiians, and Portuguese than the private schools do, the numbers being, public schools, Hawaiians, 61; private schools, Hawaiians 22; public schools, part Hawaiians, 73; private schools, part Hawaiians, 13; Portuguese, public schools, 23; private schools, 11; Japanese, public schools, none; private schools, 9; Chinese, public schools, 3; private schools, 13. The 3 Chinese are citizens who have been born and educated here.

Comparative nationality of teachers.

	Public schools.	Private schools.	Total.
Hawaiian	61	22	83
Part Hawaiian	73	13	86
American	179	135	314
British	43	16	59
German	7	8	15
Portuguese	23	11	34
Scandinavian	7	7	14
Japanese		9	9
Chinese	3	13	16
Other foreigners.....	3	13	16
Total	399	247	646

DISTRIBUTION OF SCHOOLS, TEACHERS, AND PUPILS.

The island of Hawaii, which is the largest of this group, has the largest number of schools, though it has not the largest enrollment. On Hawaii there are 57 public schools and 10 private schools, the total enrollment being 5,816, of which 4,728 are in public schools and 1,078 in private schools. There are 132 teachers engaged in the public schools and 36 in the private schools. On Oahu there are 35 public schools and 30 private schools, the former taught by 149 teachers and the latter by 108. The total enrollment for the island of Oahu is 7,987, of which 5,176 pupils are in public schools and 2,811 are in private schools. The large number of schools on Hawaii can be explained by the fact that many of them are in isolated villages, where the population is small and where the attendance falls short, in some cases, of 20 children. It has been the policy of the department to keep open schools where the number does not fall below 12. On the other hand, on the island of Oahu the population is concentrated and there are no schools which fall below from 30 to 40 children, while in Honolulu, which is the chief center of population, there are two schools which number in the neighborhood of 600 each and another which counts 450 or more.

The number of private schools on the island of Oahu is very much larger than upon any other of the islands. The reason for this is that Honolulu is the headquarters for all denominational schools, as well as schools of the eleemosynary character. Out of the 57 private schools of the Hawaiian Islands, 30 are situated in Honolulu. The denomina-

tional schools are carried on by the Roman Catholics, Episcopalians, the German Lutherans, and others. The Roman Catholic schools, which are quite large, are conducted by the Sisters of the Sacred Heart for girls and the Brothers of Mary for the boys. The Episcopalians also make a sex distinction and have a school for boys, while that for girls is conducted at St. Andrew's Priory. The bequest of the late chiefess Bernice Pauahi Bishop created the Kamehameha schools, and here also there is a sex distinction, there being a Kamehameha school for boys and another for girls. The plan of the department of education, on the other hand, is to educate the sexes together, and it is asserted that as far as these schools are concerned this is by far the best method. At Oahu College and its preparatory annex the plan of coeducation of sexes is carried out even in the boarding department, so that this may qualify my remarks made above, confirming my belief in coeducation even in boarding schools.

There are a few private schools, but they are few, which are conducted for profit. The general character of the public schools on the islands is so high that it makes it hard for a teacher working purely for profit to carry on a private school.

AGES OF CHILDREN.

The school laws of the Territory demand that all children between the ages of 6 and 15 must attend some school. Between these ages at the present time there are 16,897 children in school, as against 16,218 in 1903 and 15,525 in 1902. There are also 1,182 children under 6 years of age who are attending, for the most part, kindergartens supported by voluntary contributions. Of these a considerable number are Asiatics. Of course, the attendance of these 1,182 children is entirely voluntary, whereas the attendance of the 16,897 children between the ages of 6 and 15 is obligatory, and nonattendance can be punished by legal methods. Of those above 15 years of age there are 1,220 in school, as against 1,116 reported last year. Of these, 648 are in private schools and 572 are in public schools. The Honolulu high school, the normal school, and the Lahainaluna agricultural school chiefly provide for those who are accounted for in the public-schools record. The elder pupils of the private schools will be found at Oahu College, St. Louis College, Kamehameha schools, and other establishments of the same class. These figures show that almost the whole of the school population, according to the laws of the Territory, is being instructed, and that very few are growing up in this Territory who will not have a fair knowledge of oral and written English, together with a fair amount of instruction in the elements of arithmetic. Besides this, the pupils cultivate a general knowledge of current events, as discussed in the schools, and the hand and eye are trained as well as the mind.

Ages of all pupils in all schools of the Territory of Hawaii.

PUBLIC SCHOOLS.

	Under 6.	6 to 8.	8 to 15.	Above 15.
Boys	213	2,392	5,049	291
Girls	145	1,983	4,113	281
Total.....	358	4,375	9,162	572

Ages of all pupils in all schools of the Territory of Hawaii—Continued.

PRIVATE SCHOOLS.

	Under 6.	6 to 15.	Above 15.
Boys.....	399	1,709	402
Girls.....	425	1,651	246
Total.....	824	3,360	648

TOTAL IN PUBLIC AND PRIVATE SCHOOLS.

	612	9,150	693
Boys.....	570	7,747	527
Girls.....			
Total.....	1,182	16,897	1,220

MANUAL WORK.

Upon this branch of education the superintendent and the commissioners are very eager to make improvements. Some years ago the matter was almost entirely neglected. Gradually, however, it has been possible to interest both the inspectors and teachers in this most important portion of the public school education. Of course, there are those who still retain the idea that education simply means the cultivation of the memory and other attributes of the brain, but from the point of view of Superintendent Atkinson and his colleagues, true education consists not only in cultivating those attributes but in making the hand follow the orders of the brain. The work of our normal school has greatly facilitated an improvement in manual training in the schools. The young teachers who go forth, both male and female, are all capable of giving instruction in sewing, knife work, weaving, agriculture, and drawing. Every school has its sewing chest. Every school has its agricultural implements; and in those places where there are minor industries peculiar to that district, the department strives as much as possible to have instruction given in that particular industry. Of course, in the larger schools it is possible to carry out these plans better than in the smaller schools, but there is not a school in the Territory under government control which does not instruct in some portion of manual training. Among the very small schools there is nothing done except agricultural work. In the larger schools everything is carried out, and in some of them even printing, leather work, bookbinding, and other mechanical arts have been encouraged and have met with considerable success.

Number of pupils in sewing, agriculture, manual work, and drawing in the public schools.

	Sewing.	Knife work.	Agriculture.	Lauhala and bamboo work.	Mat weaving.	Other manual training.	Drawing
Hawaii.....	1,754	58	1,783	125	2,835	43	3,154
Maui.....	1,043	49	717	146	1,693	15	1,636
Molokai.....	97	8	91	39	86	20	154
Oahu.....	2,696	130	3,009	134	4,426	144	4,555
Kauai and Niihau.....	823	31	573	22	28	115	1,403
Total.....	6,413	276	6,173	466	9,068	337	10,902

SCHOOLHOUSES AND TEACHERS' COTTAGES.

Under the loan fund bill the department has been enabled to make a large number of improvements in the school buildings. Many of these were in a very dilapidated state and had to be removed in order to give the proper accommodation for the ever increasing number of pupils in the Territory. In several cases the department was under the expense of hiring houses to be used as schoolrooms and also hiring cottages for the teachers.

The conditions in the Territory of Hawaii with regard to the residences are peculiar. In the outer districts it is in many cases practically impossible for teachers either to find domiciliary accommodations or board. Thus the department has to build its own cottages. In the past there have been many cases where able and desirable teachers were perfectly prepared to take up the work of instruction, even though they were isolated from many of the desirable things of life, but they found it was absolutely impossible to obtain even house room or board. Consequently their services were lost to the department. In Honolulu—which is a modern town—in Hilo and in Wailuku there is not the necessity of supplying teachers with accommodations and they are not so supplied, but in the country districts it has been absolutely imperative. It must be thoroughly plain to anyone who considers the matter for a moment that at the plantation schools it is not desirable that the teacher should be dependent for his house room upon the plantation authorities, nor is it desirable that a teacher who is to keep the dignity of his position should be housed in the same way the laborers are. This accounts for the number of teachers' cottages which have been recently erected.

The main schools which have been or are going to be erected under the loan act fund are, first, the Royal School, a twenty-room building, which will cost \$41,915. This will probably be completed by December. An additional building to the industrial school at Waialea to accommodate 50 boys has been erected at a cost of \$10,185. At Wailuku, on the island of Maui, a school which will grow into the high school of that island is in course of erection and will cost in the neighborhood of \$23,000. A new normal school is to be erected in Honolulu, but has not yet been advertised, because of the difficulty of obtaining a site. This site has now been settled upon and the building will be commenced probably in September. Bids for the erection of schoolrooms and dormitories for the agricultural school at Lahainaluna, island of Maui, are now published and the work upon the establishment will probably be commenced early in September. A building to contain the commercial department of the high school has been erected upon the high school grounds, which are of considerable extent. It may be stated that the present high school is being conducted in the mansion which was erected by Princess Ruth and which afterwards reverted to the high chiefess Bernice Pauahi Bishop, and from her estate it was purchased for its present purpose. The building is a very handsome one and has very expensive decorations in the interior. The grounds are well planted and the whole situation is very picturesque. On the same grounds a grammar annex to the high school has been constructed, containing five rooms. Another important school which has been built is that at Lihue, island of Kauai, with six rooms.

LAHAINALUNA.

Lahainaluna was founded in September, 1831. The land upon which it is situated had been granted by chiefs to the school. It is the oldest educational establishment in the Hawaiian Islands. For a long time it was the leading educational light for Hawaii. The first newspaper ever published in the Pacific Ocean was issued from the printing press which was set up there. Later a bookbindery was added and a number of text-books in the Hawaiian language were published from this institution. After a long career of success the institution, from some cause or other, began to fail, and for the last twenty years there has been a lack of vitality about the establishment. Causes for this may be traced to the change in our school system, to the establishment of the Kamehameha schools, to St. Louis College, and a lack of proper funds for carrying on the school.

At the beginning of this school year the department of public instruction undertook a complete reorganization of Lahainaluna. Arrangements were made for erecting proper and convenient buildings and an entirely new set of instructors was obtained. The aim of the institution at the present time is to be an agricultural school. A carpenter shop, a blacksmith shop, and a modern printing outfit have been supplied. Draft animals have been purchased and a considerable quantity of land has been put into cultivation. But for the delay in erecting the new buildings the institution could have very many more pupils than it supports at present. There is every hope, however, that during the coming year a complete success may be made of the place. A thoroughly revised curriculum will be adopted at the commencement of the year. There have been some disputes about water and land between the plantation and the school authorities, but these are now in process of adjustment, and that will give a clear field for the future.

WAIALEE INDUSTRIAL SCHOOL FOR BOYS.

This institution is situated on the northern side of the Island of Oahu, close to the railroad. It is distant about 70 miles from Honolulu. On the 13th of May, 1903, the boys from the Honolulu Reformatory School were moved there. At that time there was only one building and no cultivation. During this current year another dormitory building together with a dining room and other conveniences have been erected and also a cottage for the superintendent. These were built by contract. The boys have erected a large convenient barn, a blacksmith shop, a carpenter shop, a poi house and a house for the gasoline engine. There are now 5 acres of sweet potatoes, 500 banana plants, half an acre of sorghum, and about 2 acres devoted to minor vegetables, beans, tomatoes, onions, carrots, beets, watermelons, squash, etc. The whole lower part of the estate below the bluff has been fenced in, this also being the work of the boys. A small dairy has been established in which there are 9 cows, 1 bull, and 3 calves. Two horses and 2 mules are used in plowing. There is a growing herd of pigs, and a considerable number of well-bred fowls and ducks. The discipline of the institution is very good and a number of boys seems thoroughly reformed. Indeed, there are several who have been discharged who are earning good wages and behaving themselves. There is a regular system of parole by which boys whose conduct is

thoroughly satisfactory are allowed to leave before their terms are up, they reporting monthly either at the department or to the school agent of the various districts. If the conduct of the paroled boys is unsatisfactory they are immediately returned to the school. There are now 110 boys on the books of the institution.

GIRLS' INDUSTRIAL SCHOOL.

The girls' industrial school has been established in the old boys' reformatory school building. At the present time there are 11 inmates. In organizing an institution of this kind there are always difficulties to be met, but these have been met and there seems every probability that before the next year closes the institution will be doing the reformatory work which we so much desire. The girls come from the lowest and most vicious classes and are a harder problem to reform than the boys. They are instructed in housework, sewing, washing, ironing, cooking, and lace making. After they have been in the institution a few months it is noticeable that their physical condition is very much improved.

PUBLIC LANDS AND LAND LAWS.

By J. W. PRATT.

The original group of the Hawaiian Islands consisted of Hawaii, Maui, Molokai, Kahoolawe, Lanai, Oahu, Kauai, and Niibau, together with a number of very small adjacent points of land which are known as separate islands, but which amount to nothing unless taken in conjunction with the larger lands. Within late years other small islands in the chain extending to the north and west from the main group have become, by annexation, a part of what is now known as the Territory of Hawaii. The main group is situated between 19° and 23° north of the equator, and is about 2,000 miles west of the Pacific coast of America. This is exactly the same position north held by Cuba.

The combined area of the Hawaiian Islands is about 6,500 square miles, divided as follows as to the larger islands:

	Sq. miles.
Hawaii	4, 015
Maui	728
Oahu	600
Kauai	544
Molokai	261
Lanai	135
Niibau	97
Kahoolawe	69

Our largest island, Hawaii, is about the size of the State of Connecticut, and the combined group about equals the area of New Jersey.

LAND OWNERSHIP AND LAND LAWS.

Prior to 1839 absolute ownership and control of all lands vested in the King. In 1839 and 1840 an attempt was made to pass a law that would give some title to occupants of lands, but the law appears to have proved a failure, for conditions remained practically the same

until 1846, when a law was passed authorizing the organizing of a commission to take evidence as to occupancy and to award, to those entitled to receive the same, the lands in fee. This division, or *mahele*, of the lands took place March 7, 1848, at which time a portion of the land was reserved by the King as a private property of the Crown, a portion allotted to the chiefs and a portion to the people. On the 8th day of March, 1848, the King conveyed a large portion of all the lands, that he had retained at the division of the previous day, to the Government. The commission awarded ownership on over 11,000 claims, mostly of very small area. The result of this division of all the lands was about as follows:

	Acres.
The Crown	1, 100, 000
The Government.....	1, 413, 000
The chiefs and the people	1, 647, 000
A total	4, 160, 000

This ownership applied mostly to Hawaiians, as by the laws of 1850 and 1854 foreigners were practically prohibited from ownership in lands, except under special conditions and circumstances.

Immediately following the division, or *mahele*, the Government commenced to sell and lease its lands in large tracts in order to replenish an empty treasury. Naturally the best lands went first, as time passed the portions remaining being of the inferior class. The value of the remnant has decreased until at the present time the government lands are great in area but of the smallest value, tens of thousands of acres being barren lava, upon which not a bit of vegetation has grown from fifty to one hundred years. The result is that by far the largest portion of the lands depended on for sites for homesteads and revenue-producing purposes is now the land formerly known as the Crown lands.

By an act of the legislature approved January 3, 1865, the Crown lands were rendered inalienable, and the commissioners were allowed to lease the lands for periods of not more than thirty years. This act was framed apparently to safeguard the revenues from the land and to prevent the commissioners from selling them off in any sized tracts and at any price, as the Government lands were sold.

By an act of 1874 the minister of the interior was allowed to sell, lease, or otherwise dispose of Government lands in such manner as he might deem best. This act was amended in 1876 and 1878 by making it mandatory to sell or lease only at public auction, after advertising for at least thirty days.

By an act approved August 29, 1884, the minister of the interior was allowed to issue five-year homestead leases on lots of not less than 2 and not more than 20 acres, the lands to be appraised and the annual rental to be equal to 10 per cent of the appraised value of the land; residence and fencing required and payment of principal within five years, failing which the lands reverted to the Government.

By an act approved September 6, 1888, the above act was amended to allow lands in Kahikinui and Kipahulu, Maui, and in Kona and Puna, Hawaii, to be leased under the homestead act in tracts of not more than 100 acres. This act was again amended by act of November 14, 1890, and the term was made ten years and the annual rental reduced to 5 per cent of the appraised value.

The present land law was enacted by the legislature of the Republic of Hawaii on the 14th day of August, 1895, and with slight amendments continued in force by an act of Congress on the 27th day of April, 1900, and approved on the 30th day of April, 1900, by President McKinley. The following is a digest of our present land law.

DIGEST OF THE LAND ACT OF 1895.

[As continued in force by an act entitled "An act to provide a government for the Territory of Hawaii" passed by the Fifty-sixth Congress of the United States of America, on the 27th day of April, and approved on the 30th day of April, A. D. 1900.]

(With reference to unoccupied lands.)

The land act of 1895, as aforesaid, having for its special object the settlement and cultivation of the government agricultural and pastoral land, vested the control and management of public lands in a commissioner.

For the purposes of the act, the Territory of Hawaii is divided into six land districts, as follows:

- First. Hilo and Puna, on the Island of Hawaii.
- Second. Hamakua and Kohala, on the Island of Hawaii.
- Third. Kona and Kau, on the Island of Hawaii.
- Fourth. The islands of Maui, Molokai, Lanai, and Kahoolawe.
- Fifth. The island of Oahu.
- Sixth. The island of Kauai.

The commissioner is represented by a subagent in each district.

Public lands for the purposes of this act are classified as follows:

1. *Agricultural lands*.—First class: Land suitable for the cultivation of fruit, coffee, sugar, or other perennial crops, with or without irrigation.

Second class: Land suitable for the cultivation of annual crops only.

Third class: Wet lands such as kalo and rice lands.

2. *Pastoral land*.—First class: Land not in the description of agricultural land, but capable of carrying live stock the year through.

Second class: Land capable of carrying live stock only part of the year, or otherwise inferior to first-class pastoral land.

3. *Pastoral-agricultural land*.—Land adapted in part for pasturage and in part for cultivation.

4. *Forest land*.—Land producing forest trees but unsuitable for cultivation.

5. *Waste land*.—Land not included in the other classes.

The act provided three principal methods for the acquirement of public lands, under systems known as (1) homestead lease, (2) right of purchase lease, (3) cash freehold.

GENERAL QUALIFICATIONS OF APPLICANTS.

Applicants for land under systems named above must be over 18 years of age, must be citizens by birth or naturalization or have received a certificate of declaration of intention to become a citizen, be under no civil disability for any offense, nor delinquent in the payment of taxes. Special qualifications are named under the respective systems.

HOMESTEAD-LEASE SYSTEM.

The homestead-lease system permits the acquirement of public land by qualified persons without other payments than a fee of \$2 upon application and a fee of \$5 upon issuance of homestead lease.

The limit of area in the different classes of land which may be acquired under homestead lease is 8 acres first-class agricultural land; 16 acres second-class agricultural land; 1 acre wet (rice or kalo) land; 30 acres first-class pastoral land; 60 acres second-class pastoral land; 45 acres pastoral-agricultural land.

SPECIAL QUALIFICATIONS OF APPLICANTS FOR HOMESTEAD LEASE.

Any person having the general qualifications (as to citizenship, etc.), who is not the owner in his own right of any land in the Territory of Hawaii, other than "wet land" (rice, taro, etc.), and who is not an applicant for other land under this act may apply under this part of the act, and such application may cover one lot of wet land in addition to other land, if reasonably near. Husband and wife may not both be applicants.

Applications must be made in person at the office of subagents of the district, accompanied by sworn declaration of qualifications, and a fee of \$2.

CERTIFICATE OF OCCUPATION.

The successful applicant receives a certificate of occupation which entitles him to occupy the described premises and to receive a homestead lease for nine hundred and ninety-nine years, if conditions of certificate of occupation have been fulfilled, the conditions being—

That the occupier shall, before the end of two years, build a dwelling house and reside on the premises. He shall maintain his home on the premises from and after the end of two years from date of certificate. He shall before the end of six years from date of certificate have in cultivation not less than 10 per cent of the land, or have in cultivation 5 per cent of the land and, in good growing condition, not less than ten timber, shade, or fruit trees per acre on agricultural land, or if pastoral land, fence the same within six years.

He shall pay the taxes assessed upon the premises within sixty days after the same are delinquent.

He shall perform any conditions of the certificate for the planting or protection of trees, or preservation or destruction of vegetable pests that may be on the premises.

CONDITIONS OF HOMESTEAD LEASE.

The lessee or his successors must maintain his home on the leased premises, must pay the taxes assessed upon the premises within sixty days after the same are delinquent, and perform any condition of the lease relating to protection or planting of trees, or destruction and prevention of vegetable pests.

Lands held under a certificate of occupation or homestead lease are liable to taxation as estates in fee.

In case of the death of an occupier or lessee his interests, notwithstanding any devise or bequest, shall vest in his relations, in the order prescribed in the act, the widow or widower, being first in order, then the children, etc.

Certificate of occupation or homestead lease, or any interest thereunder, is not assignable by way of mortgage nor is the same subject to attachment, levy or sale on any process issuing from the courts of the country. Neither the whole nor any portion of the premises may be sublet.

Surrender may be made to the government by an occupier or lessee having the whole interest if all conditions to date of surrender have been fulfilled, and the person so surrendering is entitled to receive from the government the value of permanent improvement, whenever the same is received by the government from a new tenant.

RIGHT OF PURCHASE LEASES.

Right of purchase leases, for the term of twenty-one years, may be issued to qualified applicants, with the privilege to the lessee of purchasing at the end of three years and upon the fulfillment of special conditions.

QUALIFICATION OF APPLICANTS.

Any person who is over 18 years of age, who is a citizen by birth or naturalization of the United States, or who has received a certificate of declaration of intention to become a citizen, who is under no civil disability for any offense, who is not delinquent in the payment of taxes, and who does not own any agricultural or pastoral lands, in the Territory of Hawaii, may apply for right of purchase lease, the limit of areas which may be acquired being 100 acres first-class agricultural land, 200 acres second-class agricultural land, 2 acres wet (rice or taro) land, 600 acres first-class pastoral land, 1,200 acres second-class pastoral land, 400 acres mixed agricultural and pastoral land.

Any qualified person, owning less than the respective amounts stated in the foregoing list, and which is not subject to residence conditions, may acquire additional land of the classes already held by him, but so that his aggregate holding shall not be in excess of the limit named; or if desiring additional land of another class may acquire the same according to ratio established between the various classes.

Husband and wife may not both be applicants for right of purchase leases.

Application must be made in person at the office of subagent of the district, and must be accompanied by a fee equal to six months' rent of premises, fee to be credited on account of rent, if application is successful. In case of more than one application for same lot the first application takes precedence.

CONDITIONS OF RIGHT OF PURCHASE LEASE.

Term: Twenty-one years.

Rental: Eight per cent on the appraised value given in lease, payable semiannually.

The lessee must from the end of the first to the end of the fifth year continuously maintain his home on the leased premises.

The lessee must have in cultivation at the end of three years 5 per cent and at the end of five years 10 per cent of his holdings, and maintain on agricultural land an average of ten trees to the acre.

Pastoral land must be fenced.

Interest in right of purchase lease is not assignable without written consent of the commissioner of public lands, but the lease may be surrendered to the government.

In case of forfeiture or surrender of right of purchase lease, reappraisement is made of the land and of permanent improvements thereon, and if the land is again disposed of, the incoming tenant shall pay for such permanent improvements and the amount when so received by the government shall be paid to the surrendering lessee.

CONDITIONS UNDER WHICH PURCHASE MAY BE MADE.

At any time after third year of leasehold term, the lessee is entitled to a land patent giving fee simple title, upon his payment of the appraised value set forth in lease, if he has reduced to cultivation 25 per cent of his leased premises and has substantially performed all other conditions of his lease.

CASH FREEHOLDS.

Cash freehold lots are sold at auction to the highest qualified bidder, at appraised value as upset price.

The qualifications of applicant for cash freeholds and the areas of land which may be acquired are the same as those under right-of-purchase system.

APPLICATIONS.

Applications must be made to subagent of district in writing, with sworn declaration as to qualifications and a fee of 10 per cent of appraised value of lot, which fee is forfeited if applicant declines to take the premises at the appraised value, and is credited to him if he becomes the purchaser of the lot. If such applicant, however, is outbid, his fee is returned to him.

If two or more applications are made and there is no bid above the upset price, the first application takes precedence.

The purchaser at auction sale must pay immediately thereafter one-fourth of purchase price and thereupon receive a "freehold agreement."

CONDITIONS OF FREEHOLD AGREEMENT.

The freeholder shall pay the balance of purchase price in equal installments in one, two, and three years, with interest at 6 per cent, but may pay any installment before it is due, and stop corresponding interest.

Twenty-five per cent of agricultural land must be cultivated and pastoral fenced before the end of third year.

Freeholder must maintain his home on the premises from end of first to end of third year.

He may not assign or sublet without consent of the commissioner of public lands.

He must allow agents of the Territory of Hawaii and the United States to enter and examine the premises.

He must pay all taxes that may be due upon the premises.

If all conditions are fulfilled, he is entitled at end of three years to patent giving fee-simple title.

In case of forfeiture or surrender, the land and permanent improvements are reappraised separately, and the value of such improvements, when received by government from new tenant or freeholder, will be paid to surrendering freeholder.

SETTLEMENT ASSOCIATIONS.

Six or more qualified persons may form a "settlement association" and apply for holding in one block.

The provisions for cash freehold and right-of-purchase leases apply to the settlement of such blocks.

Any lot in such block which may be forfeited or surrendered or which is not taken up by any member of the settlement association within three months, shall be open to any qualified applicants.

Disputes, disagreements, or misunderstandings between the parties to certificate of occupation, homestead lease, right-of-purchase lease, or cash freehold and relating thereto which can not be amicably settled shall be submitted to the circuit judge in whose jurisdiction the premises are situated, and his decision shall be final, subject only to appeal to supreme court.

CASH SALES AND SPECIAL AGREEMENTS.

With consent of the governor public lands not under lease may be sold in parcels of not over 1,000 acres at public auction for cash, and upon such sale and payment of full consideration a land patent will issue.

Parcels of land of not over 600 acres may, with consent of governor, be sold at public auction upon part credit and part cash, and upon such terms and conditions of improvement, residence, etc., as may be imposed.

Upon fulfillment of all conditions a land patent will issue.

GENERAL LEASES.

General leases of public lands may be made for a term not exceeding five years for agricultural land and twenty-one years for pastoral land.

Such leases are sold at public auction and require rent in advance quarterly, semi-annually, or annually.

The conditions of general leases are made at discretion of the commissioner and may be made for any class of public lands.

The Crown-land leases in many cases were evidently used for political or other purposes. Large tracts of valuable land were and are to-day under lease at mere nominal rentals, such as no sane person would accept as the actual rental of the land. As an example, 500 acres of land in and adjoining the city of Honolulu is under lease to expire in 1912. The Crown received and the government now receives for this land the sum of \$100 per annum. The lessee sublets the land at an annual net profit of about \$12,000 per annum. There are 2,800 acres on Kauai for which the government receives \$800 per annum that clear the lessee \$10,000 per annum net. This man is a nonresident and subleases. Many other instances of like kind exist.

The following, taken from the 1894 report of C. P. Iaukea, the former Crown commissioner, shows how little business capacity was used in leasing these Crown lands:

By reference to the rent roll it will be seen that many of the lands, more particularly the valuable ones, are held for long terms of years, and in a number of instances the rentals, compared with the present market or ruling rates, are exceedingly low. The following statement will illustrate this:

Name of tract.	Locality.	Area.	Annual rental.	Remarks.
Kapapala	Kau	172, 780	\$1, 200. 00	Excellent grazing land.
Waiohinu	do	15, 210	600. 00	150 acres cane with valuable water springs.
Waiakea	Hilo	95, 000	2, 000. 00	3,000 acres cane; good coffee land.
Hunuula	do	101, 000	1, 000. 00	500 acres cane.
Honokaia	Hamakua	5, 186	305. 00	800 acres cane.
Auwaiohimu	Honolulu	500	100. 00	Valuable town lots.
Waimanalo	Koolau	6, 500	1, 500. 00	1,200 acres cane.
Lualualei	Waianae	14, 772	700. 00	500 acres cane.
Kapaa and Anahola	Kauai	13, 474	600. 00	1,700 acres cane.
Total .....	.....	424, 422	8, 005. 00	Area cane land, 7,850 acres.

The above figures show that of a total acreage of 424,422 (nearly one-half the whole area of the Crown lands) the rental per acre averages less than 2 cents. These tracts comprise a very valuable proportion of some of the choicest lands in the country, and include upward of 7,800 acres cane land now actually under cultivation, besides a very large area suitable for coffee and other tropical products.

The unfortunate part, to the present generation, of this matter is that a large majority of these leases are still in existence and have many years to run. The Republic of Hawaii, by its laws, merged the Crown and Government lands under the head and title of public lands, and placed their control in the hands of a commission of three.

THE LAND OFFICE.

The Fifty-sixth Congress, in an act to provide a government for the Territory of Hawaii, provided that the commission of three be done away with and a commissioner be appointed by the governor of Hawaii to conduct the affairs of the land department. He is responsible for the administration of the land law. His salary is \$3,600 per annum.

The following comprise the staff of the commissioner:

On the Island of Oahu, 1 secretary, subagent and bookkeeper; 1 patent clerk and 1 clerk.

On the Island of Hawaii, 2 subagents and 2 rangers.

For the islands of Maui, Molokai, Lanai, and Kahoolawe, 1 subagent, and the Island of Kauai, 1 subagent, making a total of 9 regular employees.

SETTLEMENT.

Since taking office on December 1, 1903, it was found the old system of handling lands and the revenues therefrom was entirely inadequate. Aiming to prevent fraud in the handling of the lands, and the possibility of shortages in the revenues from the lands, an entirely new method of accounting for the revenues and listing lands was established. Public lands of greater or less area for the production of sisal, coffee, bananas, pineapples, vanilla beans, etc., are available for settlement on any of the larger islands. Although there are many difficulties to be met with by the settler, still a man of energy and perseverance with small means can probably overcome them. One of the most important difficulties is transportation, but in certain industries this is not so great. Inspection of public lands by prospective settlers is invited and solicited. It is advisable for any colony or body of men to delegate one or two trustworthy members to visit and report on the lands before the main body moves in the matter. It is my intention, with the proper approval, to cut up and offer for settlement every piece of arable land fit to put a settler on as fast as the leases expire. That in following this plan there will be opposition is a certainty, but in the firm belief that this is the only way to increase the citizen population and the wealth, prosperity, and productiveness of the Territory this policy will be maintained.

Lands that are not fit for settlement in small holdings, but which capital may make productive to some certain extent, should be sold outright instead of being allowed to lie idle for another one hundred years.

By the treaty of annexation the title to all public lands is vested in the United States Government, but by the same treaty the use and benefit derived from these lands remain with the people of the Territory. In other words, the Territorial government practically holds the lands in trust and the revenue from the rental of the lands forms a considerable part of the government revenue, while proceeds from the sale of the lands must by law go to liquidate the bonded indebtedness of the Territory.

By referring to the list of patents issued during the past year it will be seen that the first one under the present administration was No. 4782, and following this number there are but five patents on land exchanges. These patents were issued to consummate transactions and agreements made by the previous administration and which had reached such a stage that it was impossible to withdraw them. The numbers of these patents on exchange are as follows: 4793, 4804, 4819, 4820, and 4827.

WATER LICENSE ISSUED.

A reference to the list of general leases issued during the year ending June 30, 1904, shows that the first lease or license issued by the present administration was that to the Kohala-Hamakua Ditch Company. This license was sold at public auction at the judiciary building, Honolulu, March 12, 1904. It allows the licensee to go upon the lands of the government lying between Waipio Gulch and the Honokane-Awini boundary, and between the sea and the 4,200-foot contour line, and conserving and conducting therefrom all the running natural surface water. This water will be taken out and used upon the arable lands of the Kohala district, and the assurance of an abundant and constant supply will undoubtedly cause the people of that section to generally increase their area under cultivation. It will also greatly increase the yield of those lands already being tilled.

The section from which this water is to be taken is one of the roughest and wildest coast sections of the Hawaiian Islands. Its only value is in its abundant water supply, and up to the present this water has run to waste into the sea.

Attention is also called to the increased revenues received by the present administration for lands leased, and also to the fact that all leases for a longer term than five years contain the following special conditions:

And it is further agreed and understood by and between the parties hereto that should at any time during the term hereof part or parts of the herein-demised premises become susceptible of agricultural purposes or be required by the lessor for road or other public uses, the said lessor may reassume and take possession of such part or parts, the same thereupon to be reserved from and cease to be subject to the covenants and conditions of this lease; it being expressly agreed, however, that the said lessor shall be the sole and exclusive judge of the susceptibility of any and all parts of said premises for agricultural purposes and upon the event of the resumption of possession thereof by the lessor for that reason the rent herein reserved shall thereupon be reduced in the proportion that such part or parts bear to the whole.

EMBEZZLEMENTS.

The manner in which the business of this department was conducted previous to my assuming office is shown by these facts:

According to the books the following amounts were due the government on land transactions:

Rents from general leases	\$44, 698. 95
Interest on right of purchase and homestead leases and special agree- ments	21, 635. 50
On purchase price of lands	4, 484. 05
<hr/> Making a total of.....	70, 818. 50
Close investigation showed that of this amount sums had been collected and embezzled to the extent of.....	27, 234. 00
<hr/> Leaving a balance actually due of.....	43, 584. 50

To the amount embezzled should be added about \$5,000 in fees and commutations. The exact amount has not been ascertained as yet, but the old books are now in the hands of the auditor and will soon be known. The embezzlers are under arrest.

It was also found that the patents had been issued in very many cases where the patentee had undoubtedly failed to fulfill conditions, and as this fact was known to other settlers it has caused endless trouble, because the government is now charged with discrimination.

One clause of our law states that the patent shall issue if the conditions have been "substantially performed." This wording has been bent and twisted to meet the will of the subagent and the commissioner until, in many cases, it was apparently clear to them that the "conditions had been substantially performed," when as a matter of fact the patentee never saw his land.

As very valuable lands are placed in the hands of settlers at exceedingly low figures, it is the intention of the present administration to insist upon having the conditions actually performed, trusting to decisions of the United States courts in like cases for guidance. This will create trouble for a short time only, as it will soon be understood that there are two parties to each contract, and that an honest attempt on the part of the settler will meet with prompt recognition on the part of the government.

The public lands of the Territory of Hawaii comprise about 1,720,000 acres. Of this total there are some 500,000 acres which may be classed as barren, owing to the fact that they are rugged and inaccessible mountain tracts, hopeless in the extreme as homesteads. Under the classification of grazing or forest lands there are included 1,000,000 acres, leaving, according to the present division, only about 220,000 acres of so-called first-class agricultural land. Of this there are 25,000 acres which are classed as kula or rice and taro lands and sugar lands. This is not a close classification, for of the million acres of forest lands experience has shown that probably 10 per cent are as highly productive as any of the lower areas.

The higher lands—those which have heretofore been known only as cattle lands, and more recently as forest reserves—are now being made more easy of access through the building of roads where formerly only trails were used, and the value of the acreage will increase in proportion as they are opened. The lands are often so situated that cultivation will make them as great conservers of rainfalls as if they were kept in forests, and thus there is a consequent prospect that the near future will see many hundreds of acres added to the arable areas.

Among the lands classed as agricultural there are acres which are in close contiguity to sugar plantations, and some of these are not available for general agriculture, except where special arrangements have been made with the plantation for the use of water for irrigating purposes. The expense of putting water upon the dry lands is heavy, and this precludes any other than action in concert, or through large corporations which are able to put hundreds of thousands of dollars into pumps and pipe lines.

The average price of sugar lands from private owners is from \$25 to \$60 an acre, but from the government to homesteaders the average is \$10 to \$15. Coffee lands range from \$10 to \$15 an acre under homestead agreement. Grazing lands run from \$1.25 upward.

The land laws of Hawaii can be amended by Congress only, and there have been no changes made since annexation. At present the land office is checking and verifying the various lists of public lands, "taking stock" as it were. When completed there will be accurate lists of the lands, showing the use to which they may be adapted, their situation, area, and value. It is believed that the public lands of Hawaii have heretofore been listed at from 20 to 50 per cent of their value.

Receipts of the public lands department for the year ending June 30, 1904.

LAND REVENUE.

Rents:		
General leases	\$112,543.81	
Right of purchase leases	8,230.40	
Olaa leases	726.34	
Kaimu leases	14.48	
Puukapu leases	34.91	
Miscellaneous	1,248.00	
Interest:		
Homesteads	309.10	
Special agreements	659.72	
Cash freeholds	50.18	
Olaa lots	84.30	
Office fees	314.80	
Patent fees	195.00	
		\$124,411.04

LAND SALES.

Purchase right of purchase leases	14,133.99	
Special agreements	2,735.20	
Homesteads	946.17	
Cash freeholds	652.48	
Olaa lots	405.23	
Cash sales	60.00	
Kaimu and Waiakolea	29.35	
		18,962.42
Total		143,373.46

Land patents issued during the year ending June 30, 1904.

Patent No.	Date issued.	Patentee.	Area.	Location.	Consideration.	Remarks.
4731	1903. July 1	W. C. Achi.....acres..	4.166	Honoma line, S. Kona, Hawaii.	\$1.00	Land exchange.
4732	....do....	Maria Vieira Silva..do....	81.18	Waikaumalo, Hilo, Hawaii.	811.80	Right of purchase lease.
4733	July 14	F. W. Barbour.....do....	17.09	Kaiwiki, Hilo, Hawaii.	136.72	Do.
4734	....do....	Antonio de S. da Costa, acres.	27.77	Waikaumalo, Hilo, Hawaii.	445.50	Do.
4735	....do....	Joaquin A. Silva...acres..	18.10	....do.....	271.50	Do.
4736	....do....	Hee Akou.....do....	17.13	Puukapu, S. Kona, Hawaii.	85.65	Do.
4738	Aug. 10	Manuel Enos Tavash, acres.	14.7	Kaiwiki, Hilo, Hawaii.	118.80	Do.
4739	....do....	G. F. Affonso.....acres..	18.7	....do.....	149.20	Do.
4740	Aug. 19	John Kane.....do....	13.93	Nanawale, Puna, Hawaii.	170.84	Homesteads.
4741	Aug. 21	Martin Campbell...do....	13.28	Puukapu, S. Kona, Hawaii.	33.20	Cash freeholds
4742	Aug. 21	John K. Peterson...do....	100	Olaa, Puna, Hawaii.	600.00	Right of purchase lease.
4743	Aug. 27	Maj. E. Davis.....do....	.52	Tantalus Heights, Kona, Oahu.	1.00	Land exchange.
4744	....do....	A. Enos.....do....	20.24	Waipunalei, Hilo, Hawaii.	242.88	Homesteads.

Land patents issued during the year ending June 30, 1904—Continued.

Patent No.	Date issued.	Patentee.	Area.	Location.	Consideration.	Remarks.
4745	1903. Aug. 27	Alfred Fielding...acres..	16.4	Kaiwili, Hilo, Hawaii.	\$132.72	Right of purchase lease.
4746	Sept. 4	Manuel Soares ....do....	6.3	.....do.....	52.28	Do.
4747	.....do.....	Jacinto Carreta .do....	5.7	.....do.....	52.28	Do.
4748	.....do.....	Mrs. Kini Koukoulou, acres.	11.84	Puukapu, S. Kona, Hawaii.	40.00	Do.
4749	Sept. 9	H. F. Wichman, square feet.	4,193	Waialeale, Koolau-poko, Oahu.	1.00	Landexchange.
4750	Sept. 14	Elena Kuluwaimaka, square feet.	33,798	Hauula, Koolau-poko, Oahu.	1.00	Do.
4751	June 23	H. M. Von Holt...acres..	2,629	Lualualei, Waianae, Oahu.	1.00	Do.
4752	Sept. 21	Manuel Vierra ....do....	28	Ponahawai, Hilo, Hawaii.	224.00	Right of purchase lease.
4753	Sept. 28	P. E. Harkins ....do....	84.24	Kaohu, Puna, Hawaii.	591.15	Do.
4754	Oct. 5	J. A. Magoon, square feet.	3,044	Punchbowl St., Kona, Oahu.	502.90	Landexchange.
4755	Oct. 24	Elia Naone .....acres..	56.68	Waikamalo, Hilo, Hawaii.	900.00	Right of purchase lease.
4757	.....do.....	Jose da Costa Morgada, acres.	23.4	Kaiwili, Hilo, Hawaii.	187.20	Do.
4758	.....do.....	Manuel M. Conca.acres..	21.4	Olau, Puna, Hawaii.	40.00	Do.
4759	Oct. 26	Michael Komorskey, acres.	99.16	.....do.....	597.48	Do.
4760	Oct. 28	H. M. Von Holt, square feet.	19,542	Iwilei, Honolulu, Oahu.	1.00	Landexchange.
4761	Oct. 30	R. K. Baptiste ....acres..	19.6	Kaiwili, Hilo, Hawaii.	155.44	Time payment.
4762	.....do.....	Geo. M. Deacon .do....	82.98	Waikamalo, Hilo, Hawaii.	996.00	Right of purchase lease.
4763	.....do.....	Antonio Ah Sin....do....	17.12	Waikoa, Kula, Maui.	51.86	Do.
4764	.....do.....	Francisco D.Aruda.do....	9.02	Pulehuiki, Kula, Maui.	63.14	Do.
4765	.....do.....	Manuel Mareira .do....	6.95	.....do.....	38.99	Do.
4766	.....do.....	Honda.....do.....	20.08	Waipunalei, Hilo, Hawaii.	289.50	Homesteads.
4767	Oct. 31	Manuel Perera Martines, acres.	14.38	.....do.....	183.60	Right of purchase lease.
4768	.....do.....	Manuel Perera Silva, acres.	18.09	.....do.....	176.70	Do.
4769	.....do.....	H. Piper.....acres..	61.54	Kaohu, Puna, Hawaii.	369.24	Do.
4770	.....do.....	Walter E. Shaw....do....	110.76	Nahiku, Hana, Maui.	359.97	Do.
4771	Nov. 4	Germain Pacheco .do....	14.86	Waipunalei, Hilo, Hawaii.	157.50	Do.
4772	.....do.....	S. Shimamoto.....do....	30.73	Olau, Puna, Hawaii.	92.94	Olau reservation.
4773	.....do.....	Marria Carvalho...do....	20.31	Ninole and Wailau, Kau, Hawaii.	121.86	Homesteads.
4774	.....do.....	A. Grossi.....do....	11.1	Olau, Puna, Hawaii.	217.60	Right of purchase lease.
4775	Nov. 5	W. P. Thomas.....do....	.44	Wahiawa, Waialua, Oahu.	1.00	Landexchange.
4776	.....do.....	Samuel M. Damon.do....	742	Monanlua, Kona, Oahu.	122.30	Do.
4777	Nov. 10	T. Clive Davies....do....	40	Waiakea, Hilo, Hawaii.	1.00	Do.
4778	Nov. 12	Maria Pavao.....do....	32.7	Ponahawai, Hilo, Hawaii.	345.00	Cash freeholds.
4779	.....do.....	J. P. Fernandes....do....	17	.....do.....	258.00	Do.
4780	Nov. 14	Joao Fernandes .do....	68.46	Waikamalo, Hilo, Hawaii.	645.00	Right of purchase lease.
4781	Nov. 17	Bernice P. Bishop estate, square feet.	44,452	Waiakea, Hilo, Hawaii.	1.00	Landexchange.

COMMENCEMENT OF GOVERNOR CARTER'S ADMINISTRATION.

4782	Dec. 10	Andrew Chalmers.acres..	20	Kahuku, Hilo, Hawaii.	\$300.00	Homesteads.
4783	...do....	Yosene Kami.....do....	19.71	Waipunalei, Hilo, Hawaii.	283.50	Do.
4784	...do....	S. W. Kamoi.....do....	16.40	Nanawale, Puna, Hawaii.	164.00	Do.
4785	...do....	Mary An Hall.....do....	16.48	Ahualoa, Hamakua, Hawaii.	126.60	Do.
4786	...do....	Keaweualani.....do....	19.74	Kealahou, N. Kona, Hawaii.	148.00	Do.
4787	...do....	J. Mokuai kai.....do....	25.45	Kohanaiki, N. Kona, Hawaii.	92.00	Do.

Land patents issued during the year ending June 30, 1904—Continued.

COMMENCEMENT OF GOVERNOR CARTER'S ADMINISTRATION—Continued.

Patent No.	Date issued.	Patentee.	Area.	Location.	Consideration.	Remarks.
4788	1904. Jan. 15	Joseph Viera .....acres..	17.36	Waikauamalo, Hilo, Hawaii.	\$260.40	Right of purchase lease.
4789	...do....	John R. Gaspar.....do....	52	Kaiwiki, Hilo, Hawaii.	416.00	Do.
4790	...do....	Antonio Jesus.....do....	17	Ahualoa, Hamakua, Hawaii.	127.50	Homesteads.
4791	...do....	Antonio Cordeiro...do....	16.50	...do.....	123.75	Do.
4792	...do....	Mrs. Kaili Ikaaka...do....	18.02	Ninole and Wailau, Kau, Hawaii.	108.12	Do.
4793	Feb. 24	Bernice P. Bishop estate, square feet.	8,175	Keakaukui, Kona, Oahu.	1.00	Landexchange.
4794	Mar. 29	Jose Muniz Medeiros, acres.	31.2	Paauiilo, Hamakua, Hawaii.	312.00	Right of purchase lease.
4795	...do....	Otto Medeiros .....acres..	70.91	Niupaa, Hamakua, Hawaii.	709.10	Do.
4796	...do....	John K. Lanakila...do....	20.68	Puukapu-Waimea, S. Kohala, Hawaii.	51.70	Cash freeholds.
4797	...do....	Paulo.....do....	21.68	...do.....	54.20	Right of purchase lease.
4798	...do....	D. W. K. Waiwai...do....	27.4	Kupahua, Puna, Hawaii.	42.00	Time payment.
4799	...do....	Mrs. E. N. Low.....do....	18.07	Puuanahulu, N. Kona, Hawaii.	45.00	Do.
4800	Apr. 4	Charlotte Kaohu...do....	10.57	Waipunaiei, Hilo, Hawaii.	122.28	Right of purchase lease.
4801	...do....	Jose G. Serrao.....do....	82.8	Ponahawai, Hilo, Hawaii.	82.80	Cash freeholds.
4802	...do....	Maikui.....do....	15.89	Niupaa, Hamakua, Hawaii.	158.90	Right of purchase lease.
4803	...do....	Joe Gomez.....do....	20.10	Paauiilo, Hamakua, Hawaii.	206.00	Do.
4804	May 2	H. M. Von Holt.....sq. ft..	32,200	Kuwili, Kona, Oahu	1.00	Landexchange.
4805	May 16	Manuel Peicato.....acres..	17.3	Waikauamalo, Hilo, Hawaii.	259.50	Right of purchase lease.
4806	...do....	B. H. Brown.....do....	28.5	Olaa, Puna, Hawaii.	170.40	Olaa reservation.
4807	...do....	Wm. B. Nailima, sr. do....	26.85	...do.....	161.10	Do.
4808	...do....	Julho Furtado.....do....	6.65	Kaauhuhu, N. Kohala, Hawaii.	20.00	Time payment.
4809	...do....	C. L. Kimokeo.....do....	6.6	...do.....	41.00	Do.
4810	...do....	Manuel G. Clement...do....	18	...do.....	52.00	Do.
4811	...do....	Robert Laing.....do....	21.23	...do.....	160.00	Do.
4812	...do....	Mary Anderson.....do....	18.31	...do.....	105.00	Do.
4813	...do....	Frank Caetano.....do....	12.80	...do.....	39.00	Do.
4814	...do....	Joao de Nevas.....do....	10	...do.....	31.00	Do.
4815	...do....	John de Nevas.....do....	14.08	...do.....	43.00	Do.
4816	...do....	Manuel Duarte Martinez, acres.	12.1	...do.....	37.00	Do.
4817	...do....	Manuel Assencao...acres..	12.10	...do.....	47.00	Do.
4818	May 18	Peter R. Nelson.....do....	14.25	...do.....	43.00	Do.
4819	...do....	John K. Naone.....sq. ft..	512	Kalokohonu, Pauoa, Kona, Oahu.	1.00	Land exchange.
4820	...do....	C. B. Maile.....do....	2,700	Kawaiiki, Kapalama, Kona, Oahu.	10.20	Do.
4821	June 20	Iokua Maluo.....acres..	31.69	Waikauamalo, Hilo, Hawaii.	373.50	Right of purchase lease.
4822	...do....	Mary K. Nailima...do....	15.6	Olaa, Puna, Hawaii	284.00	Do.
4823	...do....	Charles Elderts.....do....	32	...do.....	243.05	Do.
4824	...do....	D. Moku.....do....	10.57	...do.....	25.42	Cash freeholds.
4825	...do....	Kalawa.....do....	14.7	Kaauhuhu, N. Kohala, Hawaii.	45.00	Time payment.
4826	...do....	Antone C. de Souza, acres.	27.64	...do.....	83.00	Do.
4827	June 25	Kalaaloa.....sq. ft..	1,647	Hauhaikoi, Kona, Oahu.	1.00	Land exchange.
Grand total..acres..			9,785.42	.....	17,839.86	

Land exchanges.

Districts.	No.	Area.
First land district.....	2	<i>Acres.</i> 41.02
Second land district.....	1	4,166
Third land district.....	13	3,374.36
Fourth land district.....		
Fifth land district.....	16	7,581.38
Total.....		

SUMMARY, NOT INCLUDING EXCHANGES.

	Area.	Consideration.	Average per acre.
	<i>Acres.</i>		
Right-of-purchase lease.....	1,433.54	\$12,683.86	\$8.80
Homesteads.....	329.94	2,723.04	8.20
Time payment.....	253.53	988.44	3.10
Cash freeholds.....	177.03	796.12	4.40
Total.....	2,204.04	17,191.46	7.80

Land patents issued on land commission award during the year ending June 30, 1904.

Patent No.	Area.	Patentee.	Location.
8156....	203 fathoms.....	Hewahewa.....	Keopu 3, Kona, Hawaii.
8157....	56.8 acres.....	A. Keliiahonui.....	Iwilei, Kona, Oahu.
8158....	1.35 acres.....	Paukeaho.....	Keanuimano, Waimea, Kohala, Hawaii.
8159....	1.8 acres.....	Koaniani.....	Waipilopilo, Hauula, Oahu.
8160....	5,000 square feet.....	Kaalaawaawa.....	Koiiui, Honolulu, Oahu.
8161....	540.4 acres.....	W. P. Leleiohoku.....	Puanui, Kohala, Hawaii.
8162....	1,092 acres.....	M. Kekauonohi.....	Moakea, Molokai.
8163....	537 acres.....	Hinau.....	Keawanui, Molokai.
8164....	52.2 acres.....	Kahonu.....	Kahua 2, Hilo, Hawaii.
8165....	2,184.44 acres.....	W. C. Lunalilo.....	Kapahulu, Waikiki, Kona, Oahu.

Lands taken under general provisions of the land act of 1895.

[Other than cash sales and Olaa purchases under special conditions of Part IX.]

	Right of purchase lease.			Cash freehold.			Special agreement.			Homestead.	
	No.	Acres.	Value.	No.	Acres.	Value.	No.	Acres.	Value.	No.	Acres.
1. Hilo and Puna....	47	2,801.22	\$19,078.34	3	30.88	\$87.95	.....	.....	.....	3	43.78
2. Hamakua and Kohala.....	3	211.93	740.47	.....	.....	.....	.....	.....	.....	.....	.....
3. Kona and Kau.....	25	2,478.53	4,402.91	1	768	2,050.00	.....	.....	.....	13	101.80
4. Maui and Molokai.....	.....	.....	.....	.....	.....	.....	1	360	\$1,440.00	.....	.....
5. Oahu.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	7	21.16
Total.....	75	5,491.68	24,221.72	4	798.88	2,137.95	1	360	1,440.00	23	166.74

SUMMARY OF ABOVE.

	No.	Acres.	Value.
Right of purchase lease.....	75	5,491.68	\$24,221.72
Cash freehold.....	4	798.88	2,137.95
Special agreement.....	1	360	1,440.00
Homestead lease.....	23	166.74	.....
Total.....	103	6,817.30	27,799.67

Statement of expenditures for the year ending June 30, 1904.

Item.	Appropriation.	Drawn.	Balance.
Commissioner	\$5,400.00	\$1,800.00	\$3,600.00
Secretary and subagent, fifth district	3,150.00	987.90	2,162.10
Clerk and bookkeeper	2,700.00	900.00	1,800.00
Patent clerk	1,800.00	600.00	1,200.00
Typewriter and copyist	900.00	300.00	600.00
Subagent:			
First land district	1,800.00	600.00	1,200.00
Second land district	900.00	50.00	850.00
Third land district	720.00	240.00	480.00
Fourth land district	900.00	300.00	600.00
Sixth land district	540.00	90.00	450.00
Ranger, first land district	900.00	200.00	700.00
Clerk, first land district	720.00		720.00
Ranger:			
Second land district	540.00	120.00	420.00
Third land district	900.00	200.00	700.00
Fourth land district	540.00	60.00	480.00
Fifth land district	540.00	60.00	480.00
Sixth land district	360.00		360.00
Office incidentals, etc	2,400.00	1,277.78	1,122.22
Printing and advertising	3,000.00	540.61	2,459.39
Purchase of books	375.00	22.50	352.50
Appraiser's fees	225.00	6.00	219.00
Preliminary roads and trails	5,250.00		5,250.00
Expenses filing boundary certificates	375.00	25.00	350.00
Survey works class, public lands	2,500.00		2,500.00
Total	37,435.00	8,379.79	29,055.21

General leases issued during the year ending June 30, 1904.

Date of lease.	Name of lessee.	Location of land.	Class of land.	Area.	Term of lease.	Annual rental.	Former rental.
1903.				<i>Acres.</i>	<i>Years.</i>		
Nov. 17	Hutchinson Sugar Co.	Kau, Hawaii	Right of way for water pipe.	Uncertain.	30	\$20.00	.....
Oct. 15	John Broad	Kona, Hawaii	Various remnants, pastoral.		(a)	30.00	.....
Nov. 7	Chew Wo Chong Co.	Pauoa, Oahu	Taro, agricultural	1.95	5	220.00	.....
Dec. 12	Hamakua Mill Co.	Hamakua, Hawaii	Cane and pastoral	80	5	200.00	.....
Dec. 12	.....do .....	.....do .....	.....do	185	5	462.50	.....

COMMENCEMENT OF GOVERNOR CARTER'S ADMINISTRATION.

1904.							
Mar. 12	J. S. Low	Kohala, Hamakua	Water right .....	.....	50	\$1,000.00	.....
Apr. 1	Mrs. J. K. Iaukea.	Kaneohe, Oahu...	Fish pond and kula.	6.25	10	135.00	\$50.00
Apr. 26	Wailuku Sugar Co.	Waijahu, Maui ...	Cane and kula ...	75.01	5	220.00	100.00
Apr. 23	Hawaiian Agricultural Co.	Kau, Hawaii .....	.....do	186	5	600.00	250.00
Apr. 23	Wing Sing Lee Co.	Manoa, Oahu	Taro and kula ...	6.51	5	175.00	100.00
Apr. 26	American Sugar Co.	Hoolehua, Molokai.	Pastoral	3,736	14	440.00	.....
May 7	L. K. Kentwell ..	Hauula, Oahu	Rice and kula ...	15.94	5	330.00	200.00
June 2	Chas. Gay	Kalulu, Lanai ...	Pastoral	5,000	21	600.00	150.00
June 2	A. C. Lovekin	Necker Island ..	Fishing purposes .	46.50	21	25.00	.....
June 18	Lam Wo Sing	Waikiki, Oahu ..	Rice	49.29	5	1,550.00	750.00

^a T. W. thirty days' notice.^b And 1 per cent gross revenue.

SUMMARY OF ABOVE.

General leases:		
Number		15
Acres		9,388.45
Annual rental		\$6,007.50

"CROWN LANDS" OF THE TERRITORY.

The following is a brief description of the lands formerly known as "Crown lands," but now a part of the public lands of the Territory. This list does not include those portions now under control of the superintendent of public works. The values given are approximate only, as in many cases the proper area is very doubtful and can only be correctly stated after a complete survey and location of kuleanas has been made.

The total area given below is 905,798.15 acres, and the total value of this land is placed at \$8,098,175. This is believed to be a fair valuation of the lands, unincumbered.

ISLAND OF OAHU.

DISTRICT OF KONA.

Kuwili.—Area, 17.80 acres; value, \$10,000. Fish pond and rice lands, situate on seashore at Kapalama. This property is under lease to Chin Wo Company at \$285 per annum. Date of lease, January 1, 1902; lease expires January 1, 1907.

Kapaloa.—Area, 6.55 acres; value, \$5,000. Taro land, situate in Pauoa Valley. Under lease to Kwong Ak In Company and Chew Wo Company at \$380 per annum. Date of leases, May 12, 1891, and November 7, 1903; leases expire April 1, 1906, and July, 1909.

Hamama—Piliamoo—Kauamoa—Puahia.—Area, 66.07 acres; value, \$20,000. Taro land, situate in Manoa Valley. Under lease to Kapiolani estate at \$220 per annum. Date of lease, July 1, 1882; lease to expire July 1, 1912.

Kahaumakaawe.—Area, about 6.50 acres; value, \$3,000. Taro land, situate in Manoa Valley. Under lease to Wing Sing Lee Company at \$175 per annum. Date of lease, April 23, 1904; lease to expire May 1, 1909.

Haleleua.—Area unknown. A small remnant of taro land in Manoa Valley.

Mookahi, 1 and 2.—Area, about 6 acres; value, \$3,000. Rice or banana land, above the Waikiki road and east of the Pau land. Of this land 1.46 acres is under lease to Kwong Sing Company at \$60 per annum. Lease dated April 11, 1899; expires March 5, 1915.

Kahalauiwahine—Kaluaolohe—Kaalawai—Kaloiiki—One-half Pawaa.—These are small remnants, and their exact location and area have apparently never been fixed.

Kaneloa (part).—Area, 15.70 acres; value, \$9,000. Riceland, adjoining west boundary of Kapiolani Park. Under lease to Lam Wo Sing at \$545 per annum. Lease dated March 7, 1903, and to expire March 7, 1908.

Waiomao and Pukele.—Area, about 946.75 acres; value, \$30,000. Small portion taro land, but mostly grazing land, situate in Palolo Valley. The lease on this land having expired, it is the present intention to cut the land up and open it up for settlement.

DISTRICT OF EWA.

Waikakalaua, Ohua.—About 678 acres grazing land, value \$13,000, situate on the uplands north of Pearl Harbor.

Pouhala (one-half).—Eight hundred and ten acres agricultural grazing land, value \$22,000, together with a few acres of fish pond, are situate at or near to Pearl Harbor, and are at present held under lease No. 68 to Dowsett estate, this being same lease that covers lands of Waianae-uka, the large United States military reservation. This lease is dated January 14, 1882, and expires January 14, 1912.

Weloka.—A fish pond of 21 acres, value \$10,000, adjoining the east side of Pearl City peninsula.

Puwakahu.—Five acres of rice land, value \$2,500, on the peninsula adjoining the fish pond, are under lease to Mrs. Mary D. Frear at \$100 per annum. This lease is dated July 1, 1888, and expires July 1, 1918.

Honokawailani and Kauhihau.—These are several pieces of rice and kula land, value \$5,000, containing an area of about 11.50 acres, on and near the middle loch of Pearl Harbor, and are under lease to Sing Chong & Co. at \$75 per annum. Lease dated January 1, 1889, and expires January 1, 1909.

Aiea.—About 1,170 acres of rice, cane, and pasture land, value \$90,000, running back about 4 miles from the east loch of Pearl Harbor, and having an average width of about one-third of a mile. Is under lease to the Dowsett estate at \$250 per annum. Lease dated January 14, 1882, and expires January 1, 1912.

Waianae-kai.—Six thousand one hundred and forty-three acres of cane, taro, coffee, kula, and mountain land, site of the Waianae sugar plantation, on west coast of Oahu, about 35 miles from Honolulu. Has about 2 miles of coast line and extends back about 5 miles to crest of Waianae Mountains. Value, about \$300,000. Is under lease to Waianae Company at \$1,200 per annum. Lease dated September 11, 1879, and expires July 1, 1909.

Waianae-uka.—Fourteen thousand six hundred and seventy-eight acres of kula and mountain land, inland, about 20 miles west of Honolulu. This land has been reserved for military purposes, otherwise we could quickly settle a large proportion as soon as the lease expires, it being, to a considerable extent, excellent agricultural land. Value, about \$100,000. Is under lease to Dowsett estate at (with other lands) \$500 per annum. Lease dated January 14, 1882, and expires January 14, 1912.

Keaau.—Two thousand four hundred and thirty-one acres of kula and mountain land, on the coast about 40 miles northwest of Honolulu. Has about 2 miles of coast line and extends back about 3 miles to crest of mountains. Value, about \$12,000. Not under lease.

Luahualei.—About 8,000 acres of cane, kula, and mountain land, on coast about 32 miles northwest of Honolulu. Has about 6 miles of coast line and extends about 7 miles inland to crest of Waianae range. Original area about 15,000 acres, of which about 7,000 acres of the best land has been sold from the center of the tract. Value, about \$275,000. Three thousand three hundred and thirty-two acres under lease to Waianae Company at \$9,000 per annum. Lease dated December 1, 1901, and expires December 1, 1906.

Nanakuli.—About 3,431 acres of kula and mountain land, about 29 miles northwest of Honolulu. Has about 1½ miles of coast line and extends about 4 miles inland to crest of mountains. Value, about \$20,000. Is under lease to Dowsett estate at \$570 per annum. Lease dated January 14, 1882, and expires February 28, 1912.

Kaneohe (Crown remnants).—Aggregate, 2,320.28 acres, in 19 separate pieces, and consists of all classes of land. Value, about \$100,000. There are seven leases on portions of this land, as follows: Five hundred and twenty-five acres to Kaneohe Ranch Company, at \$225 per annum; lease dated June 13, 1903, and expires June 13, 1913. Seventy-two and forty-two one-hundredths acres to Chang En Chong, at \$260 per annum; lease dated March 7, 1903, and expires March 7, 1913. Eight hundred and fifteen and thirty one-hundredths acres to J. P. Mendonca, at \$200 per annum; lease dated October 15, 1883, and expires October 15, 1913. Three hundred and forty-two acres to Heeia Agricultural Company, at \$300 per annum; lease dated April 14, 1893, and expires May 1, 1913. Sixty-seven and twenty-one one-hundredths acres to L. Ahlo, at \$500 per annum; lease dated January 14, 1891, and expires January 1, 1906. Six and twenty-five one-hundredths acres to Mrs. J. K. Iaukea, at \$135 per annum; lease dated April 1, 1904, and expires April 1, 1914. Three hundred and fifty-three acres to Kaneohe Ranch Company, at \$450 per annum; lease dated August 31, 1898, and expires July 1, 1920. This makes a total of 2,181.18 acres leased at \$2,070 per annum, and leaves 139.10 acres to be disposed of.

Waimanalo.—Six thousand nine hundred and seventy acres of cane, kula, and mountain land. Has about 6 miles of coast line on the northeast coast of Oahu and extends back to crest of mountains. Site of the Waimanalo sugar plantation. Value, about \$350,000. Is under lease to the Waimanalo Sugar Company at \$1,500 per annum. Lease dated November 22, 1890, and expires November 22, 1920.

Pupukea and Paumotu.—About 4,000 acres of pasture land, with a small proportion of arable land, situate on northwest coast of Oahu, about 70 miles from Honolulu by rail. Has about 5 miles of coast line and extends back to mountains. Value, about \$30,000. Has just been cut up into 18 lots of about 200 acres each for settlement. A forest reserve of about 400 acres is retained from the upper lands.

Hauula.—About 1,400 acres of beach, kula, and mountain land on the north coast of Oahu, about 30 miles from Honolulu. Has about 1 mile of coast line and extends back in a narrow valley about 4 miles. Not under lease. Value, about \$15,000.

ISLAND OF MAUI.

Lahaina.—About 60 acres of land and fish ponds, and consisting of many small patches and remnants in and about the town of Lahaina, remain of the Lahaina Crown lands. Value, about \$6,000.

Wahikuli.—Area, about 2,807 acres. Has about 1½ miles of coast frontage on west coast of Maui, just north of the town of Lahaina. Extends about 3 miles inland. Cane and grazing land. Value, about \$40,000. Under lease to the Pioneer Mill Company at \$700 per annum. Lease dated April 1, 1890, and to expire April 1, 1913.

Olowalu.—Area, about 6,025 acres. Has about 2½ miles of sea frontage and about 5 miles of depth to crest of mountains. Site of Olowalu Sugar Company. Good landing. Cane, grazing, and rough mountain land. Value, about \$75,000. Under lease to Olowalu Company at \$800 per annum. Lease dated October 5, 1875, and to expire July 1, 1908.

Ukumehame.—Area, about 11,000 acres. Has about 8 miles of sea frontage, including one very good landing. Extends inland about 6 miles to high elevation on mountains. Lower lands very dry and rocky; grazing. Upper lands, first-class grazing. Value, about \$40,000. Under lease to C. Brewer & Co. at \$250 per annum. Lease dated March 1, 1892, and to expire November 1, 1906.

Kealahou.—Area, 217 acres. In the Kula district, on the west slope of Haleakala. Elevation, about 3,000 feet. Main portion agricultural, balance grazing land. Value, \$5,000. Under lease to Joseph Lopez at \$100 per annum. Lease dated January 30, 1888, and to expire January 1, 1908.

Keokea and Waiohuli.—Area, about 17,000 acres. Has a frontage of about 2 miles on the west coast of East Maui, and extends up the slope of Haleakala about 12 miles to an elevation of 9,000 feet. About 5,000 acres arable land, the balance good grazing land. Value, \$200,000. Under lease to W. H. Cornwell (estate) at \$1,500 per annum. Lease dated January 12, 1891, and to expire January 1, 1911.

Waiohonu.—Area, 395 acres, about one-third of a mile wide, on the east coast of Maui; 2½ miles deep. Good boat landing. A large proportion is good cane land, the balance grazing. Value, \$9,000. Under lease (T. W.) to Reciprocity Sugar Company at \$200 per annum.

Wailua.—Area, 300 acres. Very narrow at the sea, and about 2 miles deep. Value lies principally in its water supply, and is about \$5,000. Under lease (T. W.) to C. Brewer & Co. at \$60 per annum.

Honomanu.—Area, 3,260 acres.

Wailua, 1 and 2.—Area, 3,000 acres.

Keanea.—Area, 11,148 acres.

These three have about 7 miles of coast line on the northeast coast of Maui. Their principal value lies in their supply of water, which is used on large sugar plantations west of these lands. Value, \$50,000. Honomanu is under lease to the Hawaiian Commercial and Sugar Company at \$500 per annum; lease dated July 1, 1878, and to expire July 1, 1908. Of the 14,148 acres of Keanae and Wailua 1 and 2, 12,500 acres are under lease to H. P. Baldwin at \$1,100 per annum; lease dated February 26, 1902, and to expire February 26, 1923.

Polipoli.—Area, 75 acres, about 25 acres of which are cane land, the balance being grazing land. Inland, about 3 miles west of the town of Wailuku. Value, \$3,500. Under lease to the Wailuku Sugar Company at \$220 per annum; lease dated April 26, 1904, and to expire May 1, 1909.

Kahakuloa.—Area, 10,523 acres. Has about 8 miles of coast line on north coast of west Maui. Extends inland to a point about 4,500 feet elevation. A small proportion is arable, the large majority of the land being very rough and poor grazing land. The water supply is fairly good. No roads, and trails are impassable during very stormy weather. Value, about \$25,000. About 800 acres of this land is under lease to Wailuku Sugar Company at \$100 per annum; lease dated July 1, 1863, and to expire July 1, 1913.

Napili.—Area, 300 acres, about 9 miles northwest of the town of Lahaina. Mostly dry grazing. About 1,000 feet coast line and over 3 miles deep. Value, \$4,500. Under lease (T. W.) to H. P. Baldwin at \$275 per annum. He holds as T. W. for the one year allowed by law, his old lease for fifteen years having expired January 1, 1904.

Honokawai.—Area, 4,000 acres. Has coast line of about $2\frac{1}{2}$ miles on west coast of west Maui and extends inland for about $6\frac{1}{2}$ miles. Upper portion, rough grazing; lower portion, good cane land. Value, about \$65,000. Under lease to Pioneer Mill Company at \$750 per annum; lease dated April 1, 1890, and to expire April 1, 1912.

ISLAND OF MOLOKAI.

Kalamaula.—Area, about 6,747 acres. Has about $2\frac{1}{2}$ miles of frontage on south coast of Molokai and extends about 7 miles inland. Springs of fresh water at upper boundary; valuable fish pond and cocoanut grove at beach; balance dry grazing land. Value, \$35,000.

Kapaakea.—Area, about 2,178 acres. A long, narrow strip with about one-half mile of sea frontage and a depth of about 6 miles. Fish ponds at beach, but mostly dry grazing land. Value, \$7,500.

Palaau.—Area, about 11,250 acres. In three sections. Larger piece has about 7 miles of frontage on north coast; smaller piece has about 1 mile of frontage on south coast; remaining and smallest piece is inland. Nearly all dry grazing land. Value, \$35,000.

The above lands of Kalamaula, Kapaakea, and Palaau are under lease to the American Sugar Company (now a stock-raising concern) at \$1,200 per annum; lease dated February 10, 1888, and to expire January 1, 1918.

Ualapue.—Area, about 709 acres. A long, narrow strip, having about three-fourths of a mile frontage on southeast coast and extending about 3 miles inland to top of mountain range. Some good taro land and fish ponds on coast, balance grazing land. Value, about \$4,500. Grazing land is under lease to H. R. Hitchcock at \$210 per annum; lease dated August 31, 1898, and to expire September 1, 1919. Fish pond is under lease to A. C. Dowsett at \$55 per annum; lease dated January 1, 1896, and to expire January 4, 1911.

ISLAND OF LANAI.

Kamoku.—Area, about 8,000 acres. Good grazing land. Has about 3 miles of sea frontage, with a good harbor. Extends inland about 6 miles. Value, \$40,000.

Paomai.—Area, about 9,000 acres. Good grazing land. Has about $5\frac{1}{2}$ miles of sea frontage, including one fair landing. Extends inland over 6 miles. Value, \$37,000.

Kamoku and Paomai are under one lease to Charles Gay at \$500 per annum; lease dated December 19, 1890, and expires January 1, 1916.

ISLAND OF KAUAI.

Kalaheo.—About 4,000 acres of cane, kula, and mountain land, having about 2 miles of coast line on south coast of Kauai, and extending back to mountains. Under lease to McBryde Sugar Company, at \$300 per annum. Lease dated February 15, 1859, and expires February 15, 1909. Value, \$150,000.

Hanapepe.—About 8,000 acres of cane, rice, and kula land, having about $3\frac{1}{2}$ miles of coast line (embracing Hanapepe Bay) on south coast of Kauai. Very valuable water rights. Under lease to Hawaiian Sugar Company, at \$1,000 per annum. Lease dated December 27, 1887, and expires December 27, 1917. Value, \$350,000.

Waimea.—About 92,000 acres of cane, rice, kula, and wood land, having about 25 miles of coast line on west coast of Kauai. Very valuable water rights. Value, \$2,000,000. Two leases, as follows: To Gay and Robinson, the Ahupuaa of Waimea, at \$1,300 per annum. Lease dated December 27, 1887, and expires December 27, 1917. To V. Knudsen, the Ahupuaas of Kekaha, Pokii, Waiawa, Mokihana, Milolii, Nuololo, and Mana, at \$4,000 per annum. Lease dated June 1, 1890, and expires June 1, 1920.

Hanalei.—About 16,000 acres of rice, kula, and mountain land, having about 4 miles of coast line on north coast of Kauai. Valuable water supply and large forest reserve. Value, \$100,000. Lease expiring, this land is being cut up into homesteads and grazing tracts.

Anahola and Kapaa.—About 13,400 acres of rice, sugar, kula, and mountain forest land. Occupies 5 miles of the east coast line of Kauai, including Anahola Harbor. Under lease to Makee Sugar Company, at \$600 per annum. Lease dated May 1, 1877, and expires May 1, 1907. Value, \$400,000.

Wailua.—About 20,255 acres of rice, sugar, kula, and mountain forest land, with very large and valuable supply of water. Occupies about 5 miles of east coast of Kauai. Known and leased as Wailua-uka and Wailua-kai.

Wailua-uka.—Area, 17,455 acres; leased to Lihue Plantation, at \$1,200 per annum. Lease dated October 1, 1887, and to expire October 1, 1916.

Wailua-kai.—Area, 2,800 acres; leased to E. Lindermann, at \$800 per annum. Lease dated April 13, 1891, and to expire July 1, 1921. Total value of these lands, with their abundant water supply, is about \$750,000.

ISLAND OF HAWAII.

DISTRICT OF KONA.

Puuwaawaa.—Area, about 40,000 acres. Has about 7 miles of coast line, including Kiholo Harbor, and extends inland about 14 miles to an elevation of 6,900 feet. Mostly barren lava on lower lands. Some of upper land good grazing. Some arable land between 2,500 and 3,500 feet elevation. No running water. Considerable rain. Value, about \$75,000. Under lease to R. Hind, at \$1,210 per annum. Lease dated March 1, 1894, and to expire August 15, 1918. Lessee required to allow no lantana to grow upon the land.

Haleohiu.—Area supposed to be about 1,000 acres. Has about one-half mile of coast line on west coast, and extends about 7 miles inland to an elevation of about 3,300 feet. Very long and narrow. Rough and dry pasture land. Value, \$1,250.

Waiaha 2.—Area about 260 acres; about one-fourth the size, otherwise same lay and general character as Haleohiu. Value, \$350.

Puaa.—Adjoins Waiaha 2, and said to contain 859 acres. This area is doubtful. If correct, value about \$1,075. Class same as Haleohiu.

Onouli.—Area, 367 acres. Inland, and covered with a heavy forest of koa and ohia. Value about \$1,000.

Honomalino.—Remaining area about 1,200 acres of heavy forest, inland, at an elevation of 3,000 feet. Value, \$3,500.

DISTRICT OF KAU.

Waiohinu.—Fifteen thousand two hundred and ten acres, near the south point of Hawaii. Has about 3 miles of coast line, including a

safe harbor, called Kaalualu. Extends inland about 16 miles to an elevation of 5,800 feet. The lands nearest to the coast are very rough and rocky grazing lands. The middle section contains a fair proportion of arable land, and the upper portion is covered with a dense forest of koa and ohia. Has frequent rains and a good supply of spring water. Under lease to the Hutchinson Sugar Company, at \$600 per annum. Lease dated April 5, 1889, and to expire April 1, 1914. Value, \$75,000.

Kapapala.—Area, 172,780 acres. Has about 7 miles of coast line on southeast coast, and extends inland 25 miles to the summit crater of Maunaloa at an elevation of about 13,500 feet. The lower lands are extremely dry and of very small value. The western portion contains some arable land and a large area of grazing land. Considerable rainfall on upper and western lands. Value, \$175,000. Under lease to Hawaiian Agricultural Company, at \$1,200 per annum. Lease dated July 1, 1887, and to expire July 1, 1907.

DISTRICT OF PUNA.

Olaa.—Area of remainder not cut up into homesteads, about 10,000 acres. Inland, on east slope of mountain, between 2,700 and 5,000 feet elevation. Good for little else than grazing purposes. A small portion may be used later for summer mountain homes. Value, probably, \$20,000.

Apua.—Area, 9,400 acres. Has about two miles of coast line on southeast coast of Hawaii, and extends inland 8 miles to an elevation of 3,200 feet. Very rocky grazing land. Value, \$14,000.

Kaimu-Waiakolea.—Area about 5,000 acres. Has about 1½ miles of coast line on southeast coast.

Kehena.—Area about 1,000 acres. Has about 1 mile of coast line on southeast coast.

The above lands of Kaimu-Waiakolea, Kehena are of similar character, being mostly rocky grazing land, with patches of arable land here and there. Probable value about \$9,000. An 18-acre fish pond is under lease to H. E. Wilson, at \$40 per annum. Lease dated June 17, 1896, and to expire May 1, 1911.

DISTRICT OF HILO.

Waiakea.—Area about 95,000 acres. Has about 9 miles of coast line, commencing at Hilo Harbor and running east and south. Extends inland about 26 miles to an elevation of 6,000 feet. Contains about 150 acres of what might be termed town lots, probably as much more that could be called beach lots, about 5,000 acres of cane land, and balance grazing land. Portions very rough and rocky. A number of large and first-class fish ponds form a part of Waiakea. Value, \$750,000. Under lease to Waiakea Mill Company, at \$2,000 per annum. Lease dated June 1, 1888, and to expire June 1, 1918.

Ponahawai.—Reserved for homesteads and mostly taken up.

Pihonua.—Area about 57,236 acres. Extends from the water front 21 miles inland to an elevation of 6,000 feet. Value of other than town property, \$225,000. Under lease to John Baker, at \$300 per annum. Lease dated March 21, 1887, and to expire March 21, 1921.

Ili of Waiuu.—An unknown area in heart of Pihonua, 125 acres, under lease to Hilo Sugar Company, at \$500 per annum. Lease dated December 1, 1890, and to expire December 1, 1915. Value, \$12,500.

Humuula.—Area about 101,500 acres. Has but 1 mile of coast frontage. Extends inland about 40 miles to an elevation of 12,500 feet. Has about 1,000 acres of cane land near coast, and several thousand acres of arable land between cane belt and 7,000 feet elevation. Large tracts of lava and waste lands. Value, probably \$125,000. Under lease to Humuula Sheep Station Company, at \$1,000 per annum. Lease dated March 6, 1876, and to expire April 1, 1908.

Hakalau-Iki.—Area, 575 acres. On southeast coast of Hawaii, and has about one-half mile of coast line and extends about 4 miles inland. All good cane land. Value, \$65,000. Under lease to Claus Spreckels, at \$500. Lease dated October 15, 1878, and to expire October 15, 1908.

Manowaiopae.—Area, 180 acres. On southeast coast of Hawaii. Long, narrow strip. Has valuable water rights. All cane land. Value, \$20,000. Under lease to Laupahoehoe Sugar Company, at \$180 per annum. Lease dated March 28, 1893, and to expire April 1, 1908.

DISTRICT OF HAMAKUA.

Honokaia.—Area, 5,186 acres. Has three-fourths of a mile sea frontage on north coast of Hawaii. Extends inland about 8 miles to 3,300 feet elevation. Lower portion good cane land, and upper part good grazing land. Value, \$80,000. Seven hundred and fifty acres under lease to Honokaa Sugar Company, at \$2,776 per annum. Lease dated April 1, 1893, and to expire April 1, 1913. Balance (about 4,400 acres) under lease to Parker estate, at \$305 per annum. Lease dated October 1, 1878, and to expire July 1, 1913.

Kalopa.—Area, 6,600 acres. Has about one-half a mile frontage on north coast of Hawaii, and extends to 7,200 feet elevation, 13 miles up slope of mountain. Lower portion fine cane land. Has fine koa forest. All open land, good grazing. Value, \$125,000. Under lease to Parker estate, at \$1,033 per annum. Lease dated July 1, 1886, and to expire July 1, 1913.

Waimanu—Muliwai—Kaohia—Pohakumauluulu.—Area about 10,000 acres. High mountain and deep valley land, with frontage of about $3\frac{1}{2}$ miles and depth of $4\frac{1}{2}$ miles on north coast of Hawaii. Probably 5 acres of arable bottom land; balance high lands covered by heavy forests. Value, \$20,000. Two hundred and thirty-three acres under lease, as follows: Two hundred acres to L. Akaka, at \$400 per annum. Lease dated January 1, 1899, and to expire January 1, 1920. Thirty-three acres to Mrs. L. Kaili, at \$150 per annum. Lease dated July 15, 1887, and to expire July 15, 1912.

DISTRICT OF KOHALA.

Pololu.—Area about 1,300 acres. A deep valley on north coast of Hawaii, with sea frontage of one-half mile and depth of 4 miles. Contains about 200 acres of rich bottom land, the balance being very steep and heavily wooded bluffs. Value, \$20,000. Under lease to G. C. Akina, at \$600 per annum. Lease dated January 7, 1882, and to expire January 1, 1905.

Kaauhulu.—Area about 1,300 acres. Has about one-half mile sea frontage on extreme north point of Hawaii; depth of 5 miles. Good cane and grazing land. Value, \$37,500. Five hundred and eighty-three acres under lease to Hind estate, at \$1,400 per annum. Lease dated April 5, 1898, and to expire May 1, 1913. One hundred acres

under lease to Union Mill Company, at \$300 per annum. Lease dated April 5, 1898, and to expire May 1, 1913.

Kawaihae.—Area, 13,000 acres. Has about 2½ miles of frontage on west coast of Hawaii, with depth of 10 miles. About 5,000 acres very dry and poor pasture land. Balance very good grazing land, with sufficient water. Small portion arable. Regular landing at village of Kawaihae. Value, \$40,000. Under lease to Parker estate, at \$1,050 per annum. Lease dated January 1, 1888, and to expire July 1, 1913.

Momoualoo.—Area, 317 acres. A long, narrow strip of land, between 2,500 and 5,000 feet elevation, on south slope of Kohala Mountain; a portion arable, though mostly good for grazing only. Value, \$1,500. Under lease to Parker estate, at \$64 per annum. Lease dated November 15, 1853, and to expire July 1, 1913.

Waimea.—Area, 41,600 acres. Has a sea frontage of about 5 miles, including Puako Harbor, and extends inland about 20 miles. Several thousand acres of this land, at an elevation of 2,000 to 3,000 feet, is fine arable land, with plentiful supply of water. The lower land is mostly dry grazing, though there is some cane land at Puako. The highest lands furnish good grazing. Value, \$350,000. This land is all under lease to Parker estate; one lease of 258 acres, at \$258 per annum, lease dated June 30, 1888, and to expire June 1, 1908; and two leases on balance—one dated January 1, 1876, at \$1,334 per annum—the other July 1, 1878, at \$793 per annum, both to expire July 1, 1913.

THE PUBLIC WORKS DEPARTMENT.

By C. S. HOLLOWAY.

Under the former Monarchy and Republic, the department having charge of all internal improvements was under the direction of the minister of the interior. By provision of the organic act, the powers of this official were placed under the control of the superintendent of public works and a few of the duties transferred to other departments, such as the care of public lands, promotion of agricultural interests, naturalization of foreigners, promulgation of proclamations, direction of insane asylums, issuance of licenses, and registration of trademarks and brands. The construction and maintenance of light-houses and buoys was also under the supervision of the superintendent of public works until January 1, 1904, when this department was taken over by the Federal Government, President Roosevelt having issued a proclamation to this effect.

At the present time the construction of all roads and bridges, landings, wharves, and public buildings, as well as repairs to them, the operation of the Government waterworks, sewerage systems, electric-light plants, maintenance of public grounds, with the exception of one park in Honolulu, for which a commission is appointed by law, the public markets, and the pilots' establishments, are under the control and management of the public works department.

The force consists of the superintendent, assistant superintendent, and chief clerk, with his office staff, organized to collect revenues from the waterworks, sewerage system, public markets, government wharves, and rents of city property, and this subdepartment also looks after the expenditures made for public works. There are also super-

intendents for the waterworks, electric-light and sewerage departments, and a road supervisor for Honolulu. The harbor master has control of all vessels entering this port and collects fees from them for wharfage.

Plans and specifications are drawn up in the office of the assistant superintendent, and as the law requires that all work or purchase of material amounting to over \$500 shall be awarded by contract only after public advertisement for tenders, this requires the service of a large corps of engineers and draftsmen in preparing plans and specifications.

The following statements show the amounts of appropriations, and expenditures for the year ending June 30, 1904, and amounts unexpended.

SALARIES AND PAY ROLLS.

In the analysis of salaries and pay rolls, groupings are as follows:

General superintendence.—Superintendent, assistant superintendent, chief clerk, first assistant clerk, second assistant clerk, third assistant clerk, fourth assistant clerk, stenographer and typewriter, agent public works Hilo, two messengers, clerk to assistant superintendent, typewriter, and draftsmen.

Roads and bridges.—Road supervisor, road engineer, bookkeeper, road supervisor, cantoniers, and pay roll roads and bridges, Honolulu.

Waterworks.—Superintendent, clerk and assistants, reservoir keepers, plumber and assistants, tap inspector, shipping tenders, engineers and fireman, Honolulu; superintendent Lahaina waterworks, superintendent Wailuku and Kahului waterworks, superintendent Hilo waterworks, superintendent Laupahoehoe waterworks, and superintendent Koloa waterworks.

Sewerage.—Superintendent of sewers, sewer pay rolls, pay rolls garbage and excavator service, and pay roll garbage crematory.

Fire department.—Regular pay roll, fire department.

Electric lights.—Electric-light pay roll.

Harbor expenses.—Harbor master, assistant harbor masters, pilots, pay roll of pilot boats, watchman Diamond Head, watchman pilot's office, keepers of Hilo and Lahaina wharves, and steam tug pay roll.

Grounds and buildings.—Pay roll government buildings, Aala Park, Thomas and Emma squares, guards, janitor and keeper of mausoleum.

Miscellaneous.—Pay rolls Waiakamilo Camp, Honolulu market keeper and assistant, Hilo market keeper, pound masters, veterinary surgeons, light-house keepers, keepers gunpowder and kerosene oil, Honolulu and Hilo.

	Appropriations.	Expended.	Unexpended.
General superintendence.....	\$37,500.00	\$22,390.83	\$15,109.17
Roads and bridges.....	28,113.00	25,805.68	2,307.32
Waterworks.....	29,205.00	24,678.38	4,526.62
Sewerage.....	57,768.00	45,569.67	12,198.33
Fire department.....	68,560.00	43,351.62	25,208.38
Electric lights.....	9,180.00	9,005.00	175.00
Harbor expenses.....	78,300.00	35,142.80	43,157.20
Grounds and buildings.....	24,960.00	10,505.21	14,454.79
Miscellaneous.....	11,627.50	9,120.40	2,507.10
Total.....	345,213.50	225,569.59	119,643.91

ROAD WORK AND BRIDGES.

While this department has entire supervision of road work on the various islands of the group, it was some time ago deemed advisable to have local representation, and a system was adopted whereby a board of three men was appointed by the superintendent of public works in each district, to serve without pay. These boards have charge of the construction and maintenance of the roads and bridges, as well as the expenditure of road-tax funds in their various districts, amounting to \$2 per capita. Originally this system was operated satisfactorily, and it has accomplished much in building up a high standard of roads. Now, however, in many districts, there is so much work to be done that a volunteer service of this kind is inadequate, and paid engineers have been found to be more efficient. The last legislature made provision for a road engineer on the Island of Hawaii, and, as his work has proven so satisfactory, in all probability this arrangement will be adopted for the other main islands of the group. The roads in Honolulu and also the outer districts are in general well laid out, of moderate grade, and properly drained. In Honolulu and Hilo stone macadam is used entirely, the rock being obtained from government quarries, and for light traffic it will be hard to improve on this form of pavement.

Nearly all of the freight imported to the islands is landed at Honolulu and Hilo, so that there is a large amount of heavy hauling on the water front in these cities. Permanent pavements, either of stone, vitrified brick, wood, or bitumen, should be constructed. This matter is being carefully looked into at the present time in order that definite estimates can be submitted to the next legislature, and they will then be in a position to make proper appropriations if it is found desirable to take up this work. Each island has what is known as a belt road around it, and these, in most instances, consist of dirt covering, with side ditches, the top surface being properly crowned and packed. Such roads give very good satisfaction in certain districts where the rainfall is very excessive, but it is impossible to prevent a certain amount of damage in time of freshets. The general plan being followed at present contemplates the macadamizing of all of these main roads, and this work has been completed in several districts.

On Oahu, Hawaii, and Maui the bridges in most instances are of the ordinary wooden-truss construction, although on Hawaii and Kauai there are several steel bridges exceeding 100 feet in length. As far as possible in future work concrete or stone arches will be installed where the span is not too great, as there is practically no expense in the maintenance of such structures, whereas the climatic conditions here materially affect the life of steel and wood, and there is a considerable yearly expense required in repainting.

Statement of expenditures of road funds for the various islands for the year ending June 30, 1904.

	Appropriation.	Road tax.	Total.
Island of Hawaii	\$103,295.85	\$29,582.35	\$132,878.20
Islands of Maui, Molokai, and Lanai.....	11,073.61	12,967.24	24,040.85
Island of Oahu	181,301.78	44,090.81	225,392.59
Islands of Kauai and Niihau	35,238.76	16,986.59	52,225.35
Total	330,910.00	103,626.99	434,536.99

WATER SUPPLY AND SYSTEMS.

The government at the present time has waterworks systems in Honolulu, Hilo, Wailuku, Lahaina, Koloa, Waimea, and Laupahoehoe, revenues from which amounted during the past year to \$118,443.47. Honolulu is supplied with mountain water from a gravity system, as well as artesian water pumped from the lower levels to the various distributing reservoirs. There are three pumping stations, situated in different sections of the city, having a daily capacity of about 10,000,000 gallons in twenty-four hours. There is no question but that a sufficient supply of mountain water can be obtained by development in Nuuanu and Kalihi valleys and the construction of additional reservoirs. This work has been taken up under the appropriations made in the loan fund, and two reservoirs are under construction in the outer districts, one at Diamond Head, Waikiki, and the other at Kalihi. The engineering department is making full investigation in regard to the proper selection of a site for the Nuuanu reservoir, which will have a capacity of approximately 100,000,000 gallons. With this reserve the city would be amply supplied with water under a sufficient head, so that there will be no necessity of using the pumping engines. The pipe system throughout the city will have to be rearranged, and new pipe is on hand now, so that this work will be taken up immediately. It is believed that when the supply is made entirely by gravity this will tend to lower the insurance rates, as there will be no danger of interruption on account of breakdowns to the pumps. On the other islands, gravity systems have been installed at Hilo, Lahaina, Wailuku and Kahului, Waimea, Koloa, and Laupahoehoe, and reservoirs of sufficient capacity constructed at elevations above the town so that in case of fire the water pressure is sufficient and engines are not required. In Hilo and Kahului, as well as Honolulu, fire hydrants have been installed, and while there is a paid force of firemen in Honolulu, the others are volunteer organizations.

LOAN MONEY EXPENDITURES.

The first installment of money acquired from the sale of Territorial bonds, amounting to \$1,000,000, becoming available on December 18, 1903, immediate steps were taken to complete the investigations necessary to carry out the appropriations under the loan bill, so that specifications could be prepared and tenders called for. Expenditures to date are \$505,036.78, although contracts have been made which are as yet uncompleted, amounting to \$850,000, leaving a balance of \$150,000.

DREDGING HONOLULU HARBOR.

Probably the most important undertaking, when the interests of the Territory at large are considered, is the dredging of the Honolulu Harbor and the extension of the present wharf system, and it is well to call attention at this time to improvements in the harbor itself, which have been carried out since annexation.

From July 1, 1900, to June 30, 1904, expenditure on this work has been as follows:

Dredging Honolulu Harbor	\$122,845.40
Harbor moorings and buoys.....	11,481.77
Harbor improvements	8,954.91
Total	143,282.08

This work, as well as the maintenance of the light-houses, to January 1, 1904, should properly have been undertaken by the Federal Government. The cost of the maintenance of light-houses for the above period was \$39,939.99.

WHARFAGE SYSTEM AND IMPROVEMENTS.

With large steamers stopping at this port it is of the utmost importance to have the harbor of sufficient depth and size so that they can be properly handled, and through boats will find it convenient to call at this port. The harbor of Honolulu is not large, but very safe and easy of entrance. It varies in depth from 24 to 34 feet, and estimates have been made with the idea of an average depth of 34 feet throughout, the cost of this work being estimated as follows:

Soft material required to be taken out in order to obtain average depth of 34 feet, 860,000 cubic yards; cost estimated at 30 cents per yard	\$258, 000
Material composed of loose and disintegrated coral on the two shoals just inside of the channel to bring depth to 34 feet, 500,000 cubic yards; cost estimated at 90 cents per yard.....	450, 000
Material on light-house spit, 60,000 cubic yards of coral, estimated cost at 90 cents per yard.....	54, 000
50,000 cubic yards of mud, estimated at 30 cents per yard.....	15, 000
Total cost of dredging to 34 feet	777, 000

Since annexation the increase in shipping has rendered the wharf facilities inadequate, and the Government being unable to move with sufficient dispatch, private enterprises took up this work and the Oahu Railway and Land Company have constructed wharves which are under private management.

The former superintendent of public works made comprehensive plans for improvements, and the last legislature made an appropriation of \$300,000 for the reorganization of the Honolulu wharf system, as well as \$50,000 for the dredging of the channel entrance to the harbor. This dredging has just been completed and provides a waterway not less than 34 feet below mean tide at any point. At the eastern end of the harbor, next to the naval reservation, it is proposed to cut a new slip sufficient in size and depth for the new trans-Pacific steamers. The plans as finally approved contemplate a slip 200 feet in width and 610 feet in length, with covered wharves on both sides. The wharf adjacent to the naval station will be 75 feet in width, and for the present will extend out to the end of the naval wharf, within 100 feet of the harbor line, as established by the War Department. The point of land on which the light-house is standing is directly opposite this wharf, and projects so far into the harbor that it would be impossible for large steamers to turn in coming out of the slip if the wharf were carried to the harbor line. It is to be hoped that immediate steps will be taken by the Federal Government to cut away this spit of land as well as dredge the harbor to a depth of 35 feet.

SEWERS AND DRAINAGE.

The appropriation as made in the loan bill for sewers, Honolulu, amounting to \$80,000, has been expended, and the entire system as planned by Mr. Hering, with the exception of a small district in Nuuanu Valley, between Liliha and Nuuanu streets, from Kuakini to

Wyllie, completed. No provisions have been made for the Kakaako district, as a large portion of the land is below sea level, and sufficient slope can not be given to the pipes without the installation of an additional sewerage pumping station.

Work has also been carried on in connection with the system of storm sewers and drains under the appropriation in the loan fund of \$20,000. The location of the Honolulu roads and the surrounding country is such that great difficulty is found in taking care of storm water during the rainy season, and considerable damage is done to the streets where suitable provisions have not been made for storm sewers. Further additions to this system are required, and perhaps that work can be taken up after the legislature has met.

Plans for a sanitary sewer in Hilo have been prepared, but the appropriation of \$10,000 is entirely insufficient to properly carry out this work, and it is evident that it would be preferable to await a further appropriation from the legislature so that this system could be completed at one time.

GARBAGE AND CREAMATORY.

The Government maintains a garbage department in Honolulu, and during the past year the expenses have amounted to \$48,595.48, whereas the receipts were \$12,080.25.

A crematory was purchased several years ago, but funds were not provided at the time to cover the cost of erection. This work is now progressing satisfactorily, and should be completed about December 1. With this plant in operation, there will be a material saving in the cost of the disposal of garbage, as a large amount of it is now dumped at sea.

SCHOOL BUILDINGS CONSTRUCTED.

A large number of school buildings have been constructed on the various islands of the group, at an expense of \$92,827.90, as follows: Maui, 3 school buildings, 1 teacher's cottage; Oahu, 6 school buildings, 5 teachers' cottages; Hawaii, 4 school buildings, 4 teachers' cottages; Kauai, 3 school buildings; Molokai, 2 school buildings.

Of these the most important are the Royal school in Honolulu, which is a two-story brick building with cement outside finish; the school at Wailuku, Maui, which is constructed of stone; the Lahainaluna school buildings, which also embrace dormitories for the boys living there; and the Lihue school, Kauai, the latter being a frame building of neat construction. The plans for the new normal school, Honolulu, have been prepared and contract for this work will be awarded very soon.

OTHER PUBLIC BUILDINGS.

The new dispensary for Honolulu was completed about the first of the year, and is of concrete construction throughout with the exception of the interior walls. Judging by reports received from the board of health, this building has proven most satisfactory as a dispensary and chemical laboratory. The present morgue, located in the rear of the dispensary, is a frame building, and is not suitable for the requirements of the board of health. It is strongly recommended

that a concrete building be erected and that it be made sanitary throughout.

The fireproof laboratory at the Federal experimental station is of concrete construction, and will be completed in about one month's time, as well as the residence for chemist at this station, which is a two-story wooden building.

The cottage for the superintendent of the insane asylum has been completed and is now occupied. It is of artistic design, and will be in keeping with the general character of the new buildings for the insane, for which plans have been prepared and tenders submitted. These buildings will be of concrete block construction, these blocks being subject to heavy pressure so that there will be no possibility of any absorption of moisture. They are designed with an air space so that proper circulation of air is obtained in all of the rooms. The inside finish will be in white enamel, and this will permit of the walls being washed frequently and everything kept in the best sanitary condition. There will be separate buildings for the men and women, also outside kitchen and bath houses.

OTHER NECESSARY IMPROVEMENTS.

Further work under the loan appropriation is being taken up as fast as specifications are prepared, and these contemplate the construction of a large number of new roads throughout the islands as well as additional court-houses and school buildings.

Appropriations were made for wharves at Lahaina and Kahului, and the former will probably be constructed during the latter part of this year. The harbors at these places are not well protected, being more in the nature of open roadsteads, and in stormy weather the anchorage is unsafe. Large steamers engaged in carrying sugar to the coast enter these ports as well as Honolulu. Recommendations for extensive breakwaters have been made to the legislature, but no money has been appropriated for this work. It is to be hoped that the Federal Government will appreciate the necessity of carrying out these improvements in order that the large shipping interests concerned may have proper protection. The small steamers call at numerous ports on the various islands, but the landing of freight and passengers is made by means of shore boats, the depth of water at the wharves not being sufficient for steamers to run alongside. In most instances the expense of building these wharves out to deep water would not be warranted by the amount of freight handled.

The following table shows the various amounts expended and unexpended from the loan fund that were authorized by the legislature and for which contracts had been let on June 30, 1904:

LOAN.

	Expended.	Unexpended.
Reorganization of the wharf system, Honolulu	\$60,415.97	\$239,584.03
Wharf and landing, Pukoo, Molokai	69.00	4,931.00
Dredging Honolulu Harbor and deepening bar	46,883.75	3,116.25
New jail, Oahu	7,508.47	12,491.53
New insane asylum, Oahu	5,197.60	69,802.40
New dispensary, Honolulu	8,000.00	-----
Purchase of lots, electric-light station, Nuuanu Valley	6,000.00	-----
Schoolhouses and teachers' cottages, island of Oahu	60,601.06	94,798.94

LOAN—Continued.

	Expended.	Unexpended.
Schoolhouses and teachers' cottages, island of Hawaii	\$9,540.25	\$31,459.75
Schoolhouses and teachers' cottages, islands of Maui, Molokai, and Lanai ..	14,468.29	70,531.71
Schoolhouses and teachers' cottages, island of Kauai	7,822.13	19,177.87
Fireproof building for the preservation of the government archives.....	2,100.00	72,900.00
Fireproof laboratory, library, and office building for Federal experiment station	65.00	2,935.00
Residence for chemist, Federal experiment station	60.00	1,440.00
Armory, Honolulu.....	1,050.00	28,950.00
Armory, Wailuku.....	41.00	4,959.00
Armory, Hilo.....	41.00	4,959.00
Wharf at Kawaihae and approach thereto	100.00	3,400.00
<i>County of east Hawaii or districts of Hamakua, north Hilo, south Hilo, and Puna.</i>		
Puna:		
Road from Halepuaa to Kaniahiku	209.75	5,790.25
Road between 21½ and 22 miles, Volcano road.....	520.45	7,479.55
Hamakua:		
Relocating and constructing 4 miles of road between Ookala and Kukaiau.....	166.00	14,834.00
South Hilo:		
Kaumana Homestead roads, including McFarlane road	5.00	9,995.00
Sewerage system.....	302.85	9,697.15
<i>County of West Hawaii or districts of North Kohala, South Kohala, North Kona, South Kona, East Kau, and West Kau.</i>		
Court-house, jail, jailer's house, and water tank at Hookena and Kauhako, upper Government road.....	16.50	2,983.50
Water supply to Waimea Village, Hawaii.....	268.30	9,731.70
New road from Kailua to join Keauhou road at Kahaluu.....	357.95	9,642.05
Road from Pahala to Volcano House, or so much thereof as may be necessary to complete contract.....	4,848.40	20,151.60
<i>County of Maui or islands of Maui, Lanai, and Kahoolawe.</i>		
Road Nabiku to Kailua.....	161.84	39,838.16
Puaaluu to Muolea.....	24.00	9,976.00
Completion Kula Homestead road.....	33.65	3,966.35
Relocating and constructing new road from Peahi to Kailua, Hamakualoa, Maui.....	154.00	12,846.00
Bridge across Maliko Gulch at Kaluanui	20.19	1,979.81
Road Puuhele to Kihel	91.75	3,908.25
Relocating and reconstructing road and bridges, Wailuku to Iao.....	139.20	9,860.80
<i>Oahu County or island of Oahu.</i>		
Garbage crematory	276.26	9,723.74
Sewerage	63,054.56	16,945.44
Outfall sewer	18.00	19,982.00
Storm sewers and drains	12,118.89	7,881.11
Nuuanu reservoir No. 4.....	18.34	74,981.66
For the purchase of the Pahoa waterworks, including pumping plant, artesian wells, reservoir, tanks, 1½ acres of land, pipe lines, and all necessary right of way	75,000.00	---
Kalihi reservoir	545.81	49,454.19
Diamond Head reservoir	5,994.00	2,006.00
Cast-iron pipe for the waterworks department, Honolulu	88,834.02	51,741.85
Fourth district stables	135.50	7,364.50
Fifth district stables	338.94	7,161.06
District of Waiialua:		
Steel or concrete bridge at Kaupoo.....	21.00	8,979.00
Steel or concrete bridge, Kaukonahua	2.64	3,997.36
District of Ewa and Waianae:		
Bridges, approaches, and abutments	216.89	24,783.11
Road, Kipapa and Waikakalaua gulches.....	550.98	9,449.02
Honolulu:		
Fort street extension and purchasing right of way.....	2,348.91	17,651.09
Pauahi street extension and purchasing right of way.....	1,436.75	3,563.25
School street extension and purchase of right of way from Liliha street to Kamehameha IV road, opposite Markhams Lane	5,007.55	54,992.45
Queen street extension and purchasing right of way.....	8,966.18	11,033.82
<i>County of Kauai or islands of Kauai and Niihau.</i>		
Landings and buoys	2,868.21	5,131.79

COLLECTIONS BY PUBLIC WORKS DEPARTMENT.

The following statement shows the amounts and sources of collections by the department of public works for the twelve months ending June 30, 1904:

Garbage	\$7,512.75
Rents	42,433.34
Sewerage	6,767.26
Excavator	4,567.50
Land sales	2,241.14
Weights and measures	100.10
Market	10,851.50
Government realizations	13,380.17
Total	87,853.76

Detailed statement of government realizations, July 1, 1903, to June 30, 1904.

Fees:		
Building permits	\$685.00	
Cemetery gate receipts	189.00	
Registry of brands	4.00	
		\$878.00
Sales:		
Old lumber, etc	511.35	
Old building, etc	285.50	
Sundry materials	12.10	
Macadam and sweepings	71.90	
Piles	67.05	
Auction, Kalihi Camp, wharf shed, mules, etc	6,997.00	
Blueprints	4.00	
Pilot boat	60.00	
Old iron	195.00	
Wood, etc	26.00	
Copper	78.40	
Empty sacks	22.50	
		8,330.80
Sundries:		
I. O. U's on B. H. Wright shortage	300.00	
Damage to Dolphin	139.17	
Pounds, government	90.15	
Use of steam roller	46.75	
Use of diving gear	25.00	
Hawaiian Electric Company, 2½ per cent on \$142,812.01, gross earnings to May 31, 1904	3,570.30	
		4,171.37
Total		13,380.17

SEWERAGE.

The following shows the collections of rates and fees of the Honolulu sewerage system from July 1, 1903, to June 30, 1904:

Rates	\$6,532.26
Application fees	235.00
Total	6,767.26

WEIGHTS AND MEASURES.

For the twelve months ending June 30, 1904, the following number of scales and measures have been tested, adjusted, and stamped, viz:

Counter and spring-balance scales	53
Counter platform scales	53
Union platform scales	7
Portable scale	1
Beam scale	1
Balance scales	10
Twenty-ton scale	1
Liquid measures	7

Statement of receipts, by bureaus, of the department of public works from July 1, 1903, to June 30, 1904.

Harbor master:	
Honolulu	\$66,210.73
Hilo	2,260.67
Kahului	2,711.25
Powder magazine:	
Honolulu	1,680.75
Hilo	307.30
Kerosene warehouse:	
Honolulu	4,484.65
Hilo	277.95
Waterworks:	
Honolulu	103,316.02
Hilo	6,965.75
Laupahoehoe	126.05
Wailuku and Kahului	4,497.80
Lahaina	2,854.80
Koloa	190.00
Waimea	483.05
Total	196,366.77

FINANCES.

By A. J. CAMPBELL.

Under the treasury department of the Territory of Hawaii are included the treasury proper and the bureau of taxes, conveyances, and insurance.

The treasury proper is organized as follows, viz:

	Annual salary.
A treasurer	\$3,600.00
A registrar (assistant treasurer)	3,000.00
Bookkeeper and deputy insurance commissioner	2,400.00
License clerk	1,500.00
Assistant clerks and stenographer	1,860.00

Formerly this department undertook much of the bookkeeping work of the government, but the audit act, passed May 24, 1898, provided that the audit department be the accounting department, and this office now confines its accounts to a cash book and a limited number of special accounts which do not appear in the auditor's books.

Government officials in all parts of the Territory remit to this office and also send statements of such remittances to the audit department and receive from this office a receipt, countersigned by the auditor, for such remittances.

BUREAU OF TAXES.

The Territory is divided into four divisions for the assessing and collection of taxes, and there is an assessor and collector of taxes for each division appointed by the treasurer, by and with the approval of the governor. Each assessor is supplied with deputy assessors and assistants sufficient to properly assess and collect the taxes of his division.

The annual salaries of the assessors are:

Assessor first division, Island of Oahu	\$2,700
Assessor second division, Islands of Maui, Molokai, and Lanai.....	2,100
Assessor third division, Island of Hawaii.....	2,400
Assessor fourth division, Island of Kauai.....	1,800

It is the duty of these officials to make assessments and collect the taxes, remitting to the treasury daily from the Island of Oahu and weekly from the other divisions.

All property is assessed as of January 1 of each year at as near its actual cash value as possible, and the tax is 1 per cent on the total assessed value after deducting an exemption of \$300 from such assessed value.

Before July 1 any taxpayer whose return has been changed in any way by the assessor is notified of such change, and if not satisfied with the change he has until the 20th of July to note an appeal to the tax appeal court, which sits from the 1st to the 20th of August.

The assessment books are ready for inspection from the 1st to the 15th of July.

Incomes are annually assessed as of July 1, and the tax is 2 per cent of the net income after deducting an exemption of \$1,000.

All property and income taxes are due September 1 and delinquent November 15.

Every male inhabitant of the Territory between the ages of 20 and 60 is required to pay poll, road, and school taxes amounting to \$5, which are due January 1 and delinquent April 1. The amount of this road tax for each district of each division is held in the treasury as a special deposit, to be used under the supervision of the road board of the district where collected and on roads in that district only.

BUREAU OF CONVEYANCES.

This office is maintained for the purpose of recording all documents. Mr. C. H. Merriam is in charge of this office, with a salary of \$2,100 per annum, and six assistants under him.

Records are kept in fireproof vaults, thoroughly indexed, and date back to 1845. Lately the card system of indexing has been installed in this office.

INSURANCE.

Formerly any taxing of insurance companies was done by the tax assessor, but the 1903 session of the legislature passed an insurance law, modeled after the insurance laws of many States, which provides that each licensed company pay to the Territory a tax of 2 per cent on its net income. It also provides that a company which is not financially sound shall not do business in the Territory, and authorizes the insurance commissioner to revoke the license of any company whose capital becomes impaired.

BUBONIC PLAGUE.

At the opening of the year 1900 the Hawaiian treasury had on hand a surplus of current cash amounting to \$1,531,784.29, but unfortunately an epidemic of plague broke out and the care of the quarantined and other expenses involved the Territory in a very heavy outlay. Business was paralyzed and a vigorous attempt was made to stamp out this epidemic by the burning of buildings and destruction of all infected properties.

On January 20, 1900, while burning an infected building, owing to a change of wind, the fire got beyond control of the fire department and burned out about 25 acres of the most thickly populated portion of the city. The estimated loss was about \$4,000,000, and fell for the most part on those who could least afford it. It was indirectly caused by the burning of an infected building which was destroyed for the benefit of the whole community. Under these conditions the consensus of opinion was that the loss should be stood by the entire people.

With the approval of President McKinley a commission was appointed to adjudicate the claims made by these losers, but as there was some doubt about the legality of appointing a commission without authority of the legislature, this commission took no action.

On June 14, 1900, the organic act went into effect. This precluded the possibility of the Territory issuing bonds to pay these claims. The next session of the legislature provided for a commission and made partial provision for the payment of these claims. This commission met and awards were made amounting to \$1,473,173, which sum was about one-half the actual loss. An appeal was made to Congress and an act was passed by that body providing for the payment from the Federal Treasury of \$1,000,000 and authorizing the Territory to issue 4 per cent 5-15 bonds to the amount of \$326,000. According to the terms of this act, \$315,000 of these bonds were issued and sold to claimants at par.

On June 30, 1904, all claims were paid but \$13,448.83, and there was held in the treasury to meet these \$14,182.96.

This excess will revert to current cash after the final settlement of all claims.

FIRST ISSUE OF TERRITORIAL PUBLIC-IMPROVEMENT BONDS.

The organic act provides as follows:

Portion of section 55:

Nor shall the government of the Territory of Hawaii, or any political or municipal corporation or subdivision of the Territory, make any subscription to the capital stock of any incorporated company, or in any manner lend its credit for the use thereof; nor shall any debt be authorized to be contracted by or on behalf of the Territory, or any political or municipal subdivision thereof, except to pay the interest upon the existing indebtedness, to suppress insurrection, or to provide for the common defence, except that in addition to any indebtedness created for such purposes the legislature may authorize loans by the Territory, or any subdivision thereof, for the erection of penal, charitable, and educational institutions, and for public buildings, wharves, roads, and harbor improvements, but the total of such indebtedness incurred in any one year by the Territory or any subdivision shall not exceed one per centum upon the assessed value of taxable property of the Territory or subdivision thereof, as the case may be, as shown by the last general assessment for taxation, and the total indebtedness for the Territory shall not at any time be extended beyond seven per centum of such assessed value, and the total indebtedness of any subdivision shall not at any time be extended beyond three per centum of such

assessed value, but nothing in this provision shall prevent the refunding of any existing indebtedness at any time; nor shall any such loan be made upon the credit of the public domain or any part thereof, nor shall any bond or other instrument of any such indebtedness be issued unless made redeemable in not more than five years and payable in not more than fifteen years from the date of the issue thereof; nor shall any such bond or indebtedness be incurred until approved by the President of the United States.

And act 42 of the 1903 session laws of the Territorial legislature provides as follows:

ACT 42.—AN ACT to provide for public loans.

Whereas to meet the requirements of the Territory for the erection and improvement of public buildings and educational institutions, and for wharves, roads, harbor, and other public improvements, it will be necessary to effect loans from time to time by means of the issue of bonds, and

Whereas it is necessary that all loans to be effected hereafter should be effected, and that the bonds to be issued therefor should be issued, in conformity with the act of Congress providing a government for the Territory of Hawaii, approved April 30th, A. D. 1900, and that the authority to effect such loans and issue bonds in respect thereof should be given in a uniform manner,

Now, therefore, for the carrying out of the purposes above mentioned,

Be it enacted by the legislature of the Territory of Hawaii:

SECTION 1. That the treasurer of the Territory is hereby authorized and empowered, with the approval of the governor, to issue from time to time bonds of the Territory of Hawaii, with interest coupons attached thereto, to an amount not exceeding five million dollars, the principal and interest to be paid in gold coin of the United States of America, or its equivalent at its present standard of weight and fineness, in the manner, upon the terms, and for the purposes in this act stated.

SEC. 2. No such bonds shall be issued except in pursuance of an act of the legislature defining the purposes for which the same are to be issued, nor until approved by the President.

SEC. 3. All bonds issued under the authority of this act shall bear interest, payable semiannually, at a rate of not more than five per cent per annum, and be made redeemable in five years and payable in fifteen years from the date of issue thereof.

SEC. 4. All such bonds shall be exempt from any and all taxes whatsoever, and the payment of the principal and interest thereof shall constitute a charge upon the consolidated revenues of the Territory.

SEC. 5. The proceeds of the bonds so issued shall be exclusively devoted to the purposes for which the same are issued, as expressed in act of the legislature under which the issue of the bonds is authorized.

SEC. 6. The treasurer of the Territory may, with the approval of the governor, determine the denominations of such bonds to be issued under the authority of this act, and the place in which the principal and interest of such bonds, or any of them, shall be payable, and the method of their redemption. He may make such arrangements as may be necessary or proper for the sale of the whole or any part of each authorized issue. Such arrangements shall provide for the sale of such bonds by the government itself, by public advertisement for tenders, but no bonds shall be issued at less than 2 per cent below their nominal par value; and no indebtedness shall be incurred in any one year which shall exceed one per centum upon the assessed value of the taxable property of the Territory, as shown by the last general assessment for taxation.

SEC. 7. All bonds issued under the provisions of this act shall be lithographed or steel engraved, and shall be signed by the treasurer of the Territory and by the registrar of public accounts, and be sealed with the seal of the office of the treasurer. Interest coupons shall bear a lithographed or engraved facsimile of the signature of the treasurer of the Territory.

SEC. 8. This act shall take effect and become law from and after the date of its approval.

Approved this 25th day of April, 1903.

SANFORD B. DOLE,
Governor of the Territory of Hawaii.

Under the above provisions the previous administration sent a representative to New York to negotiate the sale of \$1,000,000 worth of bonds. Arrangements were made by this representative with the United States Mortgage and Trust Company, 59 Cedar street, New

York, for the engraving and issuing of the bonds, where certified copies of the laws affecting their issue, a statement of Judge Dillon in regard to their legality, and the authentic signatures of the officials are held for public inspection.

The bonds were advertised in compliance with law and the following bids were received:

From Fisk & Robinson, New York, entire issue	\$1,000,626
From Union City Bank, New York, entire issue.....	996,261
From Hawaiian Investment Company, Honolulu, entire issue.....	996,025

Fisk & Robinson were awarded the bonds at \$1,000,626.

FINANCIAL CONDITION.

Owing to the excess of expenditures over the income and the transfer of \$699,000 from current cash to loan fund to pay balance due on appropriations made by the 1898 session of the legislature from an authorized loan of \$2,000,000, and on which only \$1,201,000 had been secured prior to annexation, and the expenses incurred in the suppression of the bubonic plague amounting to \$648,348.29, the \$1,531,784.29 surplus on hand at the beginning of 1900 had been used, and the present administration, in December last, found itself short of current cash with which to meet its obligations. On the statute books was the following law, by which it was thought a temporary arrangement for a floating indebtedness could be made:

[Act 49, session laws, 1898, as amended by act 11, session laws, 1904.]

AN ACT to further provide for the payment of current accounts.

Whereas it is expedient that authority should be given to the minister of finance (treasurer) to secure funds temporarily on loan by way of a bank overdraft; now, therefore,

Be it enacted by the legislature of the Territory of Hawaii:

SECTION 1. The treasurer, with the approval of the governor, is authorized during each biennial period to open a bank account, or bank accounts, in the name of the government of the Territory of Hawaii, with any bank or banks or financial institution carrying on business in Honolulu, and, from time to time, during each such period, to receive on loan, by way of overdraft on such account or accounts, such sums of money, not to exceed in the aggregate \$500,000 at any one time, as the said treasurer and the said governor may deem necessary to meet the current expenses of the said government.

SEC. 2. The moneys borrowed by authority of this act shall be repayable by the minister of finance (treasurer) upon his tender of the same, together with interest not exceeding six per cent per annum in gold coin of the United States of America.

SEC. 3. No money shall be obtained on such account or accounts except by draft of the treasurer, countersigned by the auditor and approved by the governor.

SEC. 4. All moneys received under the authority of this act shall be paid out and used only for the current expenses under appropriations made by the legislature, as aforesaid, of the government, and such moneys shall be repayable, and the interest thereon shall be paid out of the current revenue of the government as provided by the legislature.

SEC. 5. This act shall take effect upon date of its approval.

Approved this 19th day of April, A. D. 1904.

G. R. CARTER,

Governor of the Territory of Hawaii.

In a general consultation, there being some question as to whether this law was in conflict with the organic act, it was decided that the safest course would be to have the Territory avail itself of the provisions of section 26 of the audit act, which provides for the registration of treasury warrants. This was the first time that all government obligations, whether for labor or supplies, had to be registered,

and it created some friction, causing a loss to government employees, as the warrants are discounted at from 2 per cent up.

In April the legislature met in special session and made new appropriations within the estimated income. If these are maintained, and provision can be made to have the taxes paid semiannually instead of annually, this difficulty will be modified, but not entirely avoided.

The revised statutes covering Territories make provisions for Territories to borrow in order to tide over temporary shortages, and if Congress could be induced to pass an act specifically allowing this, it would remove all doubt, putting the treasurer in a position, by the payment of interest on temporary loans, to meet all warrants with cash and relieve the individual of the loss incurred through discounting his registered warrants.

BONDED DEBT.

On June 30, 1904, the bonded indebtedness of the Territory was..... \$2, 185, 000. 00
(\$498,379.53 of this amount was on hand to pay for pending contracts.)

Floating indebtedness	\$720, 093. 99	
Current cash on hand	56, 613. 29	
		663, 480. 70

Total net indebtedness.....	2, 848, 480. 70
-----------------------------	-----------------

The following bonds of the Monarchy and Republic of Hawaii were assumed by the Territory of Hawaii:

Monarchy:

Loan act October 15, 1886, 6 per cent 5-20 bonds.....	\$2, 000, 000. 00
Loan act August 15, 1888, 6 per cent 5-20 bonds.....	190, 000. 00
Loan act October 25, 1890, 6 per cent 5-20 bonds.....	15, 000. 00
Loan act September 7, 1892, 6 per cent 5-20 bonds.....	69, 200. 00
Loan act September 7, 1892, 5 per cent 5-20 bonds.....	50, 200. 00
Loan act September 7, 1892, 4½ per cent 5-20 bonds.....	11, 000. 00
Loan act January 11, and February 18, 1893, 6 per cent 5-20 bonds..	650, 000. 00

2, 985, 400. 00

Republic of Hawaii:

Loan act June 13, 1896, 5 per cent 5-20 bonds.....	1, 201, 000. 00
--	-----------------

Total bonded debt assumed.....	4, 186, 400. 00
The postal savings bank indebtedness.....	764, 570. 31

Making a total indebtedness at the time of annexation.....	4, 950, 970. 31
The Federal Government paid.....	3, 999, 970. 31

Leaving the Territory with a bonded obligation at the commencement of its career.....	951, 000. 00
Since which time it has increased its bonded indebtedness by issuing by act of Congress:	

4 per cent 5-15 fire claims bonds amounting to.....	315, 000. 00
4½ per cent 5-15 public improvement bonds amounting to.....	1, 000, 000. 00

Total.....	2, 266, 000. 00
And decreased the bonded indebtedness by receipts from land sales.....	\$75, 000. 00
Premiums accrued in settlement of some bonds assumed by the Federal Government.....	6, 000. 00
	81, 000. 00

Leaving a net bonded indebtedness on June 30, 1904, of.....	2, 185, 000. 00
---	-----------------

The proceeds from the sale of public lands are applied to the payment of bonds and during the year ending June 30, 1904, bonds were paid amounting to \$56,000.

A statement of this special deposit is as follows:

Statement of land sales, special deposit, July 1, 1903, to June 30, 1904.

Cash balance July 1, 1903.....	\$46,749.31
Proceeds of land sales received from commissioner of public lands....	18,962.42
Total.....	65,711.73
Hawaiian government 5 per cent coupon bonds paid as provided by law as follows: Loan act of June 13, 1896, bonds Nos. 116 to 171, inclusive, at \$1,000 each.....	56,000.00
Balance July 1, 1904.....	9,711.73

A detailed statement of the actual bonds outstanding is as follows, all others having been canceled:

Fire-claims bonds (issued by act of Congress approved January 26, 1903; interest at 4 per cent per annum, payable semiannually; bonds redeemable in 5 years and payable in 15 years from May 1, 1903).....	^a \$315,000.00
Public improvement 4½ per cent bonds (issued by authority of act of the legislature of the Territory of Hawaii, approved April 25, 1903, and approved by the President of the United States; interest payable semiannually; bonds redeemable in 5 years and payable in 15 years from October 1, 1903).....	^b 1,000,000.00
Loan act June 13, 1896 (outstanding) (issued by authority of act of the legislature of the Republic of Hawaii, approved June 13, 1896; interest at 5 per cent per annum, payable semiannually; bonds redeemable in 5 years and payable in 20 years from July 1, 1896).....	870,000.00
Total bonded debt July 1, 1904.....	2,185,000.00

STATEMENT OF FIRE CLAIMS.

Oct. 15, 1902. Cash received as reimbursement from the United States Government for accrued interest paid on Hawaiian government bonds from date of annexation to date of payment of bonds	\$140,000.00
Oct. 15, 1902. Transferred from current cash	7,317.30
June 15, 1904. Balance of interest on bonds assumed by the United States Government as above	11,589.83
Sale of fire-claims bonds at par	315,000.00
Claims paid by United States Government.....	1,000,000.00
	1,473,907.13
Total claims paid by the United States Government ...	\$1,000,000.00
Total warrants paid by the Territory up to June 30, 1904.....	459,724.17
Outstanding warrants June 30, 1904	13,448.83
Total fire-claims awards	1,473,173.00
Balance to credit of fire-claims fund	734.13

TAXABLE PROPERTY.

The assessed valuation of real and personal property in the Territory for 1903 was \$129,812,682, and the tax on this, together with the specific taxes, licenses, wharfage, water rates, rents from public lands, etc., are available for the payment of appropriations made by the legislature.

^a Total authorized issue, \$326,000; total required and issued, \$315,000.

^b Total authorized issue (to be approved by the President of the United States), \$5,000,000.

If all the moneys appropriated by the last session of the legislature for the year ending June 30, 1905, are expended and the contracts carried over from last period completed and paid, the estimated income for the same period will exceed the expenditures by \$232,976.26.

Assessable values of real estate and personal properties of the Territory of Hawaii for the year 1903.

	Real estate.	Personal property.
First taxation division.....	\$34, 553, 304	\$38, 547, 182
Second taxation division.....	10, 039, 514	5, 389, 519
Third taxation division.....	16, 135, 131	13, 342, 340
Fourth taxation division.....	5, 409, 126	6, 396, 566
Total for the Territory.....	66, 137, 075	63, 675, 607

FOREIGN CORPORATIONS.

The legislature of 1898 passed a foreign-corporation law and repealed all previous existing laws on that subject. The legislature of 1903 amended that law. The main condition of the 1898 law was that these corporations file their papers and pay a filing fee of \$50. This law has been partly enforced, but many foreign corporations have not filed their papers, and none has fulfilled the condition of the 1903 amendment, which required them, in addition to filing their papers, to pay an annual license fee of one-fourth of a mill on each dollar of authorized capital, and such license fee in no case to be less than \$150.

Up to date most of these corporations have filed their papers, and licenses to the amount of \$1,750 have been collected. One company, "The Pacific Hardware and Steel Company," was brought into court, and in the circuit court the decision was in favor of the corporation, on the ground that their agent was a traveling man and his method of doing business, selling from samples only, was decided to be interstate commerce.

This case has been appealed to the Territorial supreme court. Several other suits are now pending on this same law, but as each one presents a little different phase, each has to be fought out by itself.

Franchises granted by this government and the capitalized value of the companies operating under them.

[Franchises granted since annexation require the approval of the United States Congress.]

FRANCHISES.

	Present capital.
Hawaiian Tramways Company (foreign corporation).....	\$325, 000. 00
(Franchise granted for 30 years from Aug. 29, 1884, Chap. XXXIV, Session Laws of 1884, reenacted by Chap. XVIII, Session Laws of 1886. Franchise for 30 years from Sept. 19, 1886.)	
Oahu Railway and Land Company.....	4, 000, 000. 00
(Franchise granted for 20 years from Sept. 11, 1888, Chap. LXII, Session Laws of 1888, reenacted by Chap. XXXI, Session Laws of 1890. Franchise for 50 years from Sept. 15, 1890.)	
Hawaiian Electric Light Company.....	500, 000. 00
(Franchise granted for 10 years from May 23, 1893. New franchise granted by the legislature of the Territory of Hawaii, Session Laws of 1903, approved Apr. 28, 1903, for 35 years and approved by United States Congress Apr. 21, 1904.)	

	Present capital.
Honolulu Rapid Transit and Land Company.....	\$1,000,000.00
(Franchise granted for 30 years by legislature of the Republic of Hawaii, Session Laws of 1898, approved July 7, 1898. Approved by United States Congress June 25, 1900.)	
Honolulu Gas Company (Limited)	200,000.00
(Franchise granted for 35 years by the legislature of the Territory of Hawaii, Session Laws of 1903, approved Apr. 15, 1903, and approved by United States Congress Apr. 21, 1904.)	
Franchise to maintain and operate a railroad in Kauai.....	
(Franchise granted for 30 years by the legislature of the Territory of Hawaii, Session Laws of 1903, approved Apr. 25, 1903. Not yet approved by Congress.)	

FRANCHISES GRANTED, NOT IN EXISTENCE, CONDITIONS BROKEN.

Franchise to Hamakua Water Company. (Franchise granted for 50 years by act of the legislature, Session Laws of 1890, approved November 14, 1890.)

Franchise to the Hawaiian Gas Company. (Franchise granted for 25 years by act of the legislature, Session Laws of 1890, approved November 14, 1890.)

Appropriations for legislative expenses from 1870 to 1903.

UNDER THE MONARCHY.

Session of—

1870.....	\$15,000.00
1872.....	15,000.00
1874.....	16,362.15
1876.....	21,500.00
1878.....	16,500.00
1880.....	20,000.00
1882.....	
1884.....	40,000.00
1886.....	50,000.00
1887 (special)	10,000.00
1888.....	25,000.00
1890.....	35,000.00
1892 (lasting seven or eight months).....	42,000.00

UNDER THE REPUBLIC OF HAWAII.

Session of—

1895 (special)	\$15,000.00
1896.....	26,300.00
1898 (actual expenses, \$28,562.14).....	35,000.00

UNDER THE TERRITORY OF HAWAII.

Session of—

1901 (actual expenses, \$94,654.94).....	\$94,666.00
1903 (actual expenses, \$84,611.24).....	87,471.30

Expenses of the legislature, special session, 1904.

Appropriation for "Expenses of the house of representatives of the legislature of the Territory of Hawaii in the special A. D. 1904 session"..... \$10,000.00

Expenditure:

Warrants drawn	\$9,795.59
Less the following warrants drawn contrary to the provisions of the appropriation bill—	
John H. Wise	\$240.80
Solomon Meheula	585.00
Paradise of the Pacific.....	634.20
D. H. Kahaulelio.....	105.84
W. J. Coelho.....	458.60
Enoch Johnson	240.80
Hawaiian News	21.25
	<hr/> 2,256.49

Total..... 7,509.10

Balance of appropriation for house of representatives..... 2,490.90

Appropriation for "Expenses of the senate in the special session of the legislature of the Territory of Hawaii of the year 1904"	\$5,000.00
Expenditure:	
Warrants drawn	\$3,988.58
Less the following warrants returned to the government by the recipients because they did not serve during the session—	
Cecil Brown	\$200.00
H. P. Baldwin	200.00
Do	18.00
	<hr/> 418.00
	<hr/> 3,570.58
Balance of appropriation for the senate	1,429.42
Balance unexpended	3,920.32
<i>Receipts and expenditures Territory of Hawaii, July 1, 1903, to June 30, 1904.</i>	

RECEIPTS.

General taxes	\$1,566,393.49
Road tax	114,806.00
Land sales	18,962.42
Licenses	131,355.00
Water receipts	118,433.47
Sundries (including inheritance tax, \$70)	465,405.95
Total revenue receipts	2,415,356.33
Treasury notes	145,000.00
Cash balance July 1, 1903	73,181.63
Total	<hr/> 2,633,537.96

EXPENSES.

Outstanding warrants July 1, 1903	\$240,713.42
Departmental expenses July 1, 1903, to June 30, 1904 ..	2,658,458.41
Interest on public debt, commission, and expenses ..	85,811.69
Interest on treasury notes	2,300.00
Interest on registered treasury warrants	8,719.68
Balance of expenses of legislature, 1903	11,167.36
Expenses of legislature, special session, 1904	11,079.68
Transferred to "Road tax," special deposit	114,806.00
Transferred to "Land sales," special deposit	18,962.42
Treasury notes paid	145,000.00
	<hr/> 3,297,018.66
Excess of expenses over the receipts	663,480.70
Outstanding auditor's warrants July 1, 1904	\$709,014.31
Outstanding legislature warrants	11,079.68
Cash balance July 1, 1904	56,613.29
Total	<hr/> 720,093.99
	<hr/> 720,093.99

THE AUDITING DEPARTMENT.

By J. H. FISHER.

The auditing department in its present shape was established by the passage of act 39, Session Laws of 1898 of the legislature of the Republic of Hawaii, by which it was intended to be the general bookkeeping and accounting department of the government. In furtherance of this idea double-entry books are being kept in which are shown all of the receipts and expenditures of the Territory under their appropriate headings.

All officials of the government who receive public moneys in any sums whatever are classed as public accountants, and as such are required to pay weekly, or at such other times as may be specially appointed, into the treasury all sums received by them. In return they receive two receipts signed by the treasurer, one of which is stamped across its face "original," and the other "duplicate." These are of no value until presented to the auditor, who countersigns the original and files the duplicate after writing across its face the date of receipt by him. This duplicate receipt is the authority of the auditor for charging the treasurer and crediting the proper account for the amount deposited.

All public accountants are required, not later than the 10th of the following month, to transmit to the auditor a sworn statement, on a form known as Schedule E, of all moneys received by them during the previous month.

Excepting moneys paid for the redemption of government bonds and the interest or coupons on the same, and for interest on overdue or registered warrants, drafts against "special deposits," and for expenses of the legislature, no money is paid out by the treasurer except upon warrants drawn by the auditor and made payable to the order of the parties to whom the government is directly indebted.

Permanent settlements and specific salaries are paid by warrants drawn by the auditor on the approval of the heads of departments, and a receipt for the specific salary is taken therefor bearing the number of the warrant by which it is paid.

Purchases for the government are made by proper department employees on the approval of the department chief, bills for the same being rendered on the voucher forms supplied by the Territory, and are certified by the government officer receiving the same, and approved by the heads of departments. These vouchers are grouped together according to appropriations and sent to the auditor by the 10th of each month.

Payments are made by the auditor drawing warrants for each voucher, stamping the same with the warrant number, and delivering the warrant on obtaining receipt to the voucher.

Payments under contract are made in the same manner on vouchers.

The auditor is required to make, from time to time, systematic and thorough inspection of all public accounts, and make a record of such inspection for the purpose of establishing and continuing a uniform system of keeping accounts and enforcing the same.

In case of any difference between the auditor and any of the department heads regarding the proper appropriation to which any item should be charged, or any matter regarding the construction of the "audit act," or when any amount shall be disallowed by the auditor for the reason of imperfect vouchers or incorrect certificate, or if any person or public accountant feel aggrieved by the decision of the auditor in the rejection or surcharge of the returns, or refusal to approve or allow any demand presented by such person or public accountant, any parties concerned may appeal from said decision to the justices of the supreme court, who, after investigation, may make an order directing the relief of the appellant in whole or in part.

The auditor is required to publish in a newspaper monthly and annual statements of the finances of the Territory. He is further required to make an annual report to the governor and a biennial

report to the legislature, with authority to make recommendations for the better care, custody, and payment of the public moneys, and any improvements in the mode of keeping public accounts, etc.

He is further authorized and empowered, by precept under his hand, to require such persons as he may think fit to appear personally before him and to produce such books and papers and accounts in their possession or control as may be necessary for the purpose of examination, and may administer oaths for such purposes. Any person willfully and corruptly giving false testimony incurs the same penalties as are or may be provided against persons convicted of perjury.

Any public accountant or person who shall fail or neglect to conform to any of the regulations contained in the act, or to attend for the purpose of examination, shall be liable to a penalty of not less than \$25 nor more than \$100, on conviction before any district magistrate. Provision is made in the act for the registration of warrants by the treasurer and the allowance of 5 per cent interest on all warrants so registered when there is not sufficient moneys applicable for payment on presentation. When funds again come into the treasury, payment is made by the treasurer in the order of registration, after publication of notice in the newspapers, interest ceasing on all called warrants ten days after date of publication.

Unless otherwise provided, all appropriations made by the legislature for the public service for any biennial period, and not expended during such period, lapse unless a contract shall have been made before the expiration of such period by which a liability to issue and apply the same shall have been incurred, and a certified copy of such contract shall have been deposited with the auditor.

Upon the whole the act works smoothly, and with a few minor changes or additions, which can be made by the legislature, seems to meet the requirements.

The force of the office consists of the auditor, with an annual salary of \$3,600; the deputy auditor, at \$2,400; a bookkeeper, at \$2,100; three clerks with salaries of \$1,500, \$1,380, and \$1,320, respectively; and this staff is barely adequate to keep up with the work.

In March of the present year the chief clerk of the waterworks department was discovered to be a little over \$2,800 short in his accounts. He was promptly arrested and indicted by the grand jury and is now awaiting trial. Suit has also been entered against his bondsmen.

In May of the present year a shortage was discovered in the office of the land commissioner, which, upon investigation going back to 1899, was found to amount to about \$33,000. Mr. E. S. Boyd, land commissioner, and his chief clerk were both arrested and indicted by the grand jury, and now await trial. Neither of these persons was under bonds, and, as they have no assets that can be levied on, the Territory will undoubtedly lose the whole of the amount.

In the latter case the commissioner and his clerk have been working in collusion for a long time and were systematically either giving other than officially numbered receipts for collections, or were making out receipts leaving the stub blank, and afterwards filling in the stub with the name and amount of an earlier stealing.

In the waterworks much the same method was adopted, but it had continued only for a short time, and was entirely confined to receipts for water delivered to shipping in the harbor, which does not appear on

the rate book under a privilege number. The chances for further embezzlements in this manner are lessened by having the superintendent provide a meter through which all water is delivered to vessels, a means by which the deliveries can be checked.

In the land department, after a thorough study of the needs of the office, there has been made a considerable change in the system of keeping the accounts which will more readily assist in discovering shortages.

It is almost impossible to devise systems to prevent one from stealing if he is bent on doing so. Sooner or later he can be detected and prosecuted, and the best safeguard to the Territory is rigid prosecutions. The auditor recommended to the legislature of 1903 "that all officers and clerks of the Territory be required to furnish sufficient bonds of some reliable fidelity insurance company." These bonds are preferable to those of private individuals, in that such companies have a reputation for following up and prosecuting transgressors.

The revenues of the Territory since annexation have not been sufficient to meet the expenditures, as shown by the following comparative statement of the receipts and expenditures from the time of annexation to the present date. This is due mainly to two reasons, the first being caused by the loss of revenue by the taking over the customs bureau and the post-office by the Federal Government, and secondly, by the neglect of the legislature to keep the appropriation bills to a figure somewhere near the estimated receipts of the Territory.

The excess of disbursements over receipts for the year 1900-1901 was also in part made up by expenditures on account of the bubonic plague which occurred in the first half of the year 1900, the total amount paid out on this account, directly and indirectly, amounting to \$807,008.66.

The loss of the revenues mentioned above are partly made up by the increased receipts of the taxes, which grew from \$1,215,325.91 in 1900-1901 to \$1,681,199.49 in 1903-4.

Receipts and disbursements of Hawaii.

Fiscal year.	Receipts.	Disbursements.	Excess of disbursements.
1900-1901.....	\$2,140,297.36	\$2,576,685.53	\$436,388.17
1901-2.....	2,473,172.81	2,382,968.90	<i>a</i> 90,203.91
1902-3.....	2,387,715.88	2,603,194.20	215,478.32
1903-4.....	2,415,356.33	2,844,054.81	428,698.48

a Excess of receipts.

Comparative statement of taxes collected for each fiscal year since annexation.

	1900-1901.	1901-2.	1902-3.	1903-4.
Real estate.....	\$444,059.63	\$532,637.09	\$560,456.31	\$618,890.81
Personal property.....	490,392.69	571,248.69	592,325.37	607,589.82
Insurance.....	3,223.65	3,846.00	4,685.11	4,623.38
Dogs and tags.....	4,135.86	4,325.19	4,787.60	4,484.80
Poll.....	49,922.00	46,299.00	51,009.00	48,148.00
Road (including carriages, carts, and drays).....	114,459.50	108,861.00	119,822.00	114,806.00
School.....	99,838.00	92,592.00	102,016.00	96,296.00
10 per cent penalties.....	7,699.43	9,586.27	9,359.31	12,011.82
Costs.....	1,595.15	1,525.05	1,465.65	1,806.70
Income.....		287,366.80	205,096.00	172,542.16
Total.....	1,215,325.91	1,658,107.09	1,651,023.12	1,681,199.49

THE JUDICIARY DEPARTMENT.

By W. F. FREAR.

The first four-year period in the history of this Territory has just come to a close, and with it important changes have taken place in the Territorial judiciary. Alfred S. Hartwell and Francis M. Hatch succeed Clinton A. Galbraith and Antonio Perry as associate justices of the supreme court, and A. N. Kepoikai, John A. Matthewman, and C. F. Parsons succeed John W. Kalua, W. S. Edings, and Gilbert F. Little, respectively, as judges of the second, third, and fourth circuit courts.

The courts of Hawaii correspond with the courts in the States rather than the courts in the other Territories. There is a United States district court, which has also the jurisdiction of United States circuit court, and there are distinct Territorial courts. The latter are in general a supreme court, consisting of a chief justice and 2 associate justices, 5 circuit courts, each presided over by a circuit judge, except that the first circuit court has 3 judges, and 29 district courts held by district magistrates. Cases may be taken from the supreme court, as from the State supreme courts, only to the Federal Supreme Court on writ of error and only when Federal questions are involved. The jurisdiction of the supreme court is mostly appellate. Cases are brought to it by appeal, writ of error, or exceptions. It holds one term a year, beginning the first Monday in October and continuing until final adjournment the following summer. The circuit courts have general original jurisdictions; also appellate jurisdiction in cases from the district courts. They hold, as a rule, three terms a year, varying in length from a few weeks to four months. The district courts have jurisdiction of misdemeanors and, with some exceptions, of civil cases in which the amount involved does not exceed \$300. They hold no terms, but sit continuously. Besides these courts of a general nature there are other courts or tribunals of a special nature, among which special mention may be made of the commissioner of private ways and water rights.

A year ago there seemed to be a growing sentiment that the number of the supreme court justices should be increased to five. The increase in the number of cases brought to that court seemed to call for an increase in the membership of the court in order to enable it to keep up with its work, but various changes that have taken place in legislation and otherwise afford ground for belief that this difficulty will be overcome to some extent at least in the near future. There are other reasons, however, which have not been overcome, but which alone perhaps might not at present be deemed sufficient to require an increase in the number of justices. A decision by a bench of five is naturally more satisfactory than one from a bench of three, especially if one of the justices dissents. An increase to five would also to some extent meet the argument for allowing appeals in cases in which Federal cases are not involved, or, if such appeals should be allowed, it would reduce the number of such cases in which appeals would be taken. The expense and delay that would result from such appeals, owing, among other things, to the distance from Washington, or even from California, is something that should be avoided as far as possible.

The appropriations for salaries and expenses in the judiciary department have been reduced in line with the general policy of retrenchment in view of the financial stringency in the Territory, but it is doubtful if this will operate to an appreciable extent in diminishing the efficiency of the judiciary, although it will impose heavier burdens on some officials and work more or less hardship on others.

As a rule the courts are either up to date or not far behind in their work. In the first circuit court in particular much has been accomplished toward the relief of the calendar which was so congested a year ago. This has been brought about through almost continuous sessions of three judges trying jury and other cases, and was made possible mainly through legislation enacted by the last legislature. As a result, largely of the great number of cases so tried in the first circuit court, the calendar of the supreme court has gained somewhat on that court. There is reason to believe, however, that this court, and all the courts of the Territory, will be up to date in their work at no very distant time.

An additional court was added to the courts of record of the Territory by the last legislature, namely, the court of land registration.

This court has been in operation during the past year, though thus far it has had comparatively few cases.

Several much-needed changes have been made recently in the courthouse in Honolulu, especially in the construction of a vault for the records of the supreme court and first circuit court and in the rearrangement of the clerk's offices and the library. There is need of new courthouses in several of the other circuits, the erection of which it is hoped will not be long delayed. Many volumes have been added to the supreme court and circuit court libraries during the past year.

The statistics of the judicial work of the courts are made up for the calendar years. It has been customary in the past to prepare the summaries for periods of two years for the biennial sessions of the legislature. Hereafter they will be prepared yearly. The following will give a general idea of the number and character of the cases, both civil and criminal, and the nationality of the convicted in criminal cases. There are of course some duplications owing to appeals from one court to another, and in some instances to a third court. In general, there has been a slight falling off in the number of cases during the past year as compared with the number during the preceding two years.

LIQUOR SELLING AND DISTILLING.

	1896-97.	1898-99.	1900.	1901-2.	1903.
Total convictions.....	375	258	116	317	138
Total arrests.....	623	461	205	518	234

GAMBLING.

	1896-97.	1898-99.	1900.	1901-2.	1903.
Chinese	1,577	2,096	945	2,241	904
Japanese	971	844	538	2,201	862
Portuguese	11	18	23	69	101
Hawaiians	258	429	220	470	82
Others.....	44	32	19	116	108
Total convictions	2,861	3,419	1,745	5,097	2,057
Total arrests.....	4,146	4,358	2,060	6,209	3,207

OFFENSES AGAINST THE PEACE.

Of affrays, riots, assaults and batteries of all kinds the cases were as follows:

	1896-97.	1898-99.	1900.	1901-2.	1903.
Arrests	2, 092	2, 461	1, 231	3, 096	1, 472
Convictions	1, 208	1, 475	668	1, 900	831
			1899-1900.	1901-2.	1903.
Total civil cases			7, 196	5, 056	2, 907
Total criminal cases (persons charged)			18, 849	21, 752	10, 059
Total			26, 045	26, 808	12, 966

CASES IN SUPREME, CIRCUIT, AND DISTRICT COURTS.

Supreme court	136	220	84
Circuit court	2, 388	3, 198	1, 385
District courts	23, 272	22, 996	11, 439
Naturalizations	249	394	58
Total	26, 045	26, 808	12, 966

NATIONALITY OF CONVICTED.

	1898-99.	1900.	1901-2.	1903.	Popula- tion, 1900.	Percentage.	
						1901-2.	1903.
Chinese	3, 940	1, 919	3, 302	1, 331	27, 767	0. 128	0. 0516
Japanese	1, 932	1, 480	4, 716	2, 083	61, 111	. 077	. 034
Portuguese	572	398	963	454	15, 675	. 061	. 0281
Hawaiians	3, 294	1, 808	3, 845	1, 527	37, 918	. 101	. 0972
Others	1, 359	1, 664	3, 372	1, 313	13, 530	. 240	. 0972
Total	11, 097	7, 269	16, 198	7, 708	154, 001	. 105	. 0435

DRUNKENNESS.

	1896-97.	1898-99.	1900.	1901-2.	1903.
Chinese	19	10	6	9	4
Japanese	160	134	115	363	154
Portuguese	86	92	105	201	91
Hawaiians	1, 009	1, 053	794	1, 439	573
Others	588	789	1, 163	1, 763	615
Convictions	1, 862	2, 078	2, 183	3, 775	1, 437
Arrests	2, 008	2, 192	2, 281	3, 950	1, 517

OFFENSES AGAINST CHASTITY.

Of adultery, fornication, incest, polygamy, rape, seduction, and sodomy, the cases were as follows:

	1896-97.	1898-99.	1900.	1901-2.	1903.
Chinese					13
Japanese					95
Portuguese					7
Hawaiians					74
Others					40
Convictions	397	267	138	432	229
Arrests	593	414	207	736	347

OFFENSES AGAINST PROPERTY.

Of larceny, robbery, burglary, embezzlement, felonious branding, extortion, forgery, counterfeiting, gross cheat, and receiving stolen goods, the cases were as follows:

	1896-97.	1898-99.	1900.	1901-2.	1903.
Arrests	945	979	531	1,128	594
Convictions	505	444	243	566	304

HOMICIDES.

The cases of manslaughter were as follows:

	1896-97.	1898-99.	1900.	1901-2.	1903.
Arrests	16	13	9	12	5
Convictions	4	8	6	5	4

The cases of murder were as follows:

	1896-97.	1898-99.	1900.	1901-2.	1903.
Arrests	42	7	6	35	8
Convictions	7	4	3	11	4

MISCELLANEOUS.

	1896-97.	1898-99.	1900.	1901-2.	1903.
Arrests	5,290	5,189	3,528	6,068	2,664
Convictions	3,136	3,144	2,167	4,294	1,704

SUMMARY OF ARRESTS.

	1896-97.	1898-99.	1900.	1901-2.	1903.
Drunkenness	2,008	2,192	2,281	3,950	1,511
Liquor selling and distilling	623	461	205	518	234
Gambling	4,146	4,358	2,060	6,209	3,207
Offenses against chastity	593	414	207	736	347
Offenses against property	945	979	531	1,128	594
Offenses against the peace	2,092	2,461	1,231	3,096	1,472
Homicides	58	20	15	47	13
Miscellaneous	5,290	5,189	3,528	6,068	2,675
Total	15,755	16,074	10,058	21,752	10,059

SUMMARY OF CONVICTIONS.

	1896-97.	1898-99.	1900.	1901-2.	1903.
Drunkenness	1,862	2,078	2,183	3,775	1,437
Liquor selling and distilling	375	258	116	317	138
Gambling	2,861	3,419	1,745	4,898	2,057
Offenses against chastity	397	267	138	432	229
Offenses against property	505	444	243	566	304
Offenses against the peace	1,208	1,475	668	1,900	831
Homicides	11	12	9	16	8
Miscellaneous	3,136	3,144	2,167	4,294	1,704
Total	10,355	11,097	7,269	16,198	6,708

FEDERAL LAW WORK.

By ROBERT W. BRECKONS.

During the early part of the year the local officers of the United States district attorney's department became convinced of the existence within the Territory of some kind of an organization whose operations were resulting in the importation of women from Japan for the purpose of prostitution, and in many instances in the holding of them to a condition of slavery within the Territory. Systematic and persistent work finally resulted in the unearthing of everything connected with this organization. Ample evidence was secured, showing the methods employed by the organization, and the names and addresses of the members, about 75 in number. During the year all of the members were indicted, and about two-thirds of them convicted and punished, their sentences ranging from four to eighteen months. The prosecution in these cases was not directed so much toward the suppression of prostitution as against the importation of women into the United States for the purpose of prostitution, and the holding of women to slavery.

A kindred class of cases handled during the year related to the sale by male Japanese of their wives to other Japanese. Many instances were unearthed in which Japanese husbands had, by written bill of sale, made direct transfers of their wives. In almost every case discovered, indeed, there was discovered also a written bill of sale, the document being nearly always couched in legal phraseology, resembling quite closely the usual form of bill of sale of chattels in use in the United States.

In both classes of cases above referred to, the sentences inflicted were comparatively lenient. Their prosecution among the Japanese was treated by the department as more or less educational in its nature. In nearly all of the cases it appeared that the practices indulged in by the Japanese were not considered by them as particularly criminal in their nature. Most of the defendants came into court and frankly admitted all of the facts, stating, however, that they were not aware of the existence of any law in the United States making these practices unlawful.

The prosecutions have had, in my judgment, a most beneficial effect. Several of the Japanese newspapers published in Honolulu have contained full accounts of the proceedings, and the entire Japanese population have by this time become fully acquainted with American laws on the subject.

LEGISLATIVE FINANCES.

Another quite important piece of work concluded by the department during the year in question related to the records of the legislature of the Territory of Hawaii. For some time prior to the assembling of the October, A. D. 1903, grand jury, it was publicly stated that all of the vouchers relative to the expenditure of money by the legislature of the Territory for the year 1903 had been either destroyed or concealed. When the grand jury met in October a thorough investigation was made of the matter. The vouchers were finally discovered, and unquestionably showed a very loose condition of affairs in so far

as money matters were concerned. The grand jury returned two indictments against the clerk of the legislature. Judge Dole, of the Federal court, in passing on demurrers to the indictments, held that all of the documents relating to the Territorial legislature are public records within the meaning of the statute of the United States of America. The clerk was tried on one of the indictments, and convicted. Subsequently, on account of error occurring during the trial, he was granted a new trial. This second trial will take place in October. The investigation resulted also in an investigation being made by the Territorial grand jury; several indictments and two convictions followed.

The importance of this work arises from the fact that it establishes the doctrine that records of the Territorial legislature are public records within the meaning of the act referred to. There is but little doubt that in the future money will be expended by the Territorial legislature as it should be—that is, publicly, and without any attempt at concealment.

During the year several cases of embezzlement of public funds have arisen and have been prosecuted. The prompt detection and speedy punishment meted out in these cases will unquestionably prove beneficial. The United States of America does not tolerate the idea that restitution of public money embezzled secures immunity from punishment. In some of the cases prosecuted it was apparent that a contrary idea prevailed.

ENFORCING NAVIGATION LAWS.

Considerable time was also taken up during the year with the enforcement of navigation laws. As is well known, there are many acts of the Congress of the United States framed for the protection of sailors. It has been the endeavor of the department to see that all of these laws be enforced, and I think it may safely be said that shipping masters and others have come to understand that navigation laws are not a dead letter, and they are endeavoring to comply with them as far as possible.

INTERNAL-REVENUE LAWS.

Many infractions of the internal-revenue laws of the United States have been discovered and punished. Most of these cases arose out of a section of the Revised Statutes of the United States punishing illicit distilling. The majority of the offenders were Japanese. The records of the court, however, by no means disclose all of the work done here relative to internal-revenue laws. A peculiar feature of the internal-revenue laws of the United States is that compromises of criminal as well as of civil cases are permitted. Following out his ideas on the subject—ideas which are fully supported by his superiors in Washington—the internal-revenue collector, Mr. Roy H. Chamberlain, has settled by compromise many criminal cases. The internal-revenue laws are quite complex, and not easily understood or appreciated without a close and thorough study of and long acquaintance with them. In every case where the infraction of the law has arisen from ignorance most reasonable compromises have been arranged.

INFRACTION OF CUSTOMS LAWS.

A few cases of infractions of the customs laws have been discovered and prosecuted. It is only fair to the people of the Territory, however, to say that a comparison between the port of Honolulu and other ports of the United States shows the percentage of smuggling, or attempted smuggling, to be very small here.

This report should not be closed without saying a word relative to the class of juries secured in the Federal court, and to the feeling of the people of the Territory toward the United States and its laws, as shown by the actions of juries in the Federal court. Our juries have been made up of Hawaiians, of native-born Americans, and of naturalized Americans. No matter what the make-up of the jury, however, in every instance it has been found that they are willing and anxious to arrive at a proper verdict. During the year referred to not a single instance of a juror questioning in the slightest degree the wisdom of any law of the United States of America has been encountered, or refusing to assist in the punishment of its violation because the law was new to him or it did not meet with his approval. In short, judging from the action of the juries in the Federal court, it appears evident that the people of the Territory of Hawaii are satisfied with annexation, and believe in upholding all of the laws of the United States within the Territory.

ATTORNEY-GENERAL'S DEPARTMENT.

By LORRIN ANDREWS.

The legislature in 1903 passed a law increasing the number of circuit court terms on the islands outside of Oahu, it being the expectation that as the county act then passed would go into force on the 1st day of January, 1904, the additional work of representing the Territory at these added terms would not fall upon the attorney-general's office, but upon the new county attorneys. The immediate result, however, was to increase the work of this department.

Between the last of September, 1903, and the 30th of June, 1904, there have been thirteen circuit terms held, at which 196 criminal cases have been tried and disposed of, resulting in 131 convictions and 65 acquittals; and to this should be added the work of the various grand juries and the prosecution of offenders charged with misdemeanors.

In addition to this jury work, the attorney-general's office has argued 28 cases in the supreme court, 19 of which have been decided in favor of the Territory, and has tried 37 civil cases for the Territory.

Mr. Dole, in his report for the period ending December 31, 1902, recites that in two and one-half years he had rendered 341 legal opinions to the departments. Since February 1, 1903, and up to June 30, 1904, the attorney-general's office has rendered 439 opinions to the various departments and to the legislature, of which 287 were rendered within the period covered by this report. In addition thereto, within the last year the attorney-general's office has had 654 oral consultations with heads of departments, and has drawn for their use 87 agree-

ments, contracts, leases, and other legal papers. In addition to these matters, the attorney-general's office for the first time in many years has, at the request of the treasurer, handled suits for delinquent taxes on the Island of Oahu.

COUNTY-ACT LITIGATION.

Shortly after the adjournment of the legislature which, by the passage of a county act, changed in toto the government of the Territory of Hawaii from a centralized appointive government to local government on each island which was entirely elective, the question arose as to the legality of the proposed change which was to go into effect on the 1st of January, 1904. Mr. Henry E. Cooper, as superintendent of public works, objected to the transfer of certain property under his department to a Territorial board created by the county act. A test case was brought in the shape of a mandamus directed against Mr. Cooper by the aforesaid Territorial board. The supreme court of Hawaii, however, upheld Mr. Cooper, and declared such portions of the county act affected by this suit to be unconstitutional. This decision raised further disquietude as to the validity of the act, but an election was held under the act in November, 1903, and, following that election, a contest was entered by several defeated candidates who raised technical points in connection with the construction of the act.

This contest was, however, defeated before the supreme court, the attorney-general representing the board of election. Upon the inauguration of the county government, however, on January 1, 1904, funds were found to be unavailable to carry on county government without resorting to credit until the taxes could be collected, and, owing to the distrust with which that act was then regarded by the business community, difficulty was encountered in raising such funds. As a result thereof, a test case was prepared between the Territory of Hawaii and the supervisors of Oahu, in which the Territory, by quo-warranto proceedings, challenged the validity of the county act and the election of the supervisors under the act, and on January 13, 1904, the supreme court of the Territory of Hawaii decided that the whole county act was invalid and void. Fortunately for the Territory, the system had been in operation for such a short time that there was little or no difficulty in returning to the old form of government, which from that time has been the legal form of government of the Territory of Hawaii.

THE FISHERY CASES.

When the organic act creating a government for the Territory of Hawaii was passed by the Fifty-sixth Congress, it contained the following sections:

REPEAL OF LAWS CONFERRING EXCLUSIVE FISHING RIGHTS.

SEC. 95. That all laws of the Republic of Hawaii which confer exclusive fishing rights upon any person or persons are hereby repealed, and all fisheries in the sea waters of the Territory of Hawaii not included in any fish pond or artificial inclosure shall be free to all citizens of the United States, subject, however, to vested rights; but no such vested right shall be valid after three years from the taking effect of this act unless established as hereinafter provided.

PROCEEDINGS FOR OPENING FISHERIES TO CITIZENS.

SEC. 96. That any person who claims a private right to any such fishery shall, within two years after the taking effect of this act, file his petition in a circuit court of the Territory of Hawaii, setting forth his claim to such fishing right, service of which petition shall be made upon the attorney-general, who shall conduct the case for the Territory, and such case shall be conducted as an ordinary action at law.

That if such fishing right be established, the attorney-general of the Territory of Hawaii may proceed, in such manner as may be provided by law for the condemnation of property for public use, to condemn such private right of fishing to the use of the citizens of the United States upon making just compensation, which compensation, when lawfully ascertained, shall be paid out of any money in the treasury of the Territory of Hawaii not otherwise appropriated.

Upon the last-named section some 82 suits were filed in the Territory of Hawaii by persons claiming vested rights to large tracts of water encircling the various islands. Trials were had, and the supreme court of the Territory of Hawaii held in two test cases that the owners claiming vested rights were incorrect, and that they held no such rights as mentioned in the organic act. From this decision Mr. S. M. Damon appealed to the Supreme Court of the United States upon a writ of error, and the case was argued before that tribunal in April, 1904. The decision of that court was a reversal of the decision of the supreme court of the Territory, and a statement that in this particular class of cases the parties in interest had vested rights in fisheries. Immediately following that decision, the Territory attempted to bring all of these suits to trial, but, owing to excuses by counsel representing the various owners, has not yet succeeded in disposing of any more of these cases.

THE INFAMOUS-CRIME DECISION.

At the September, 1903, term of the circuit court of the first judicial circuit the question was raised, in the case of the Territory of Hawaii *v. Wa Sin*, charged with the offense of selling poisonous drugs without a license, the penalty for which offense was a monetary fine which, if not paid, subjected the defendant to imprisonment at hard labor until it was worked out according to statute, whether or not all criminal offenses, felonies, and misdemeanors under the statutes of Hawaii were not infamous crimes. George D. Gear, second judge of the court before whom the point was argued and submitted, held that all offenses within the Territory of Hawaii were infamous crimes, and before a defendant could be put upon his trial it was necessary that he be duly and legally indicted by the grand jury, whether he be charged with a felony or misdemeanor. The effect of this decision was most drastic, requiring the attorney-general's office to not only perform its ordinary functions of presenting felonies for the consideration of the sitting grand jury, but of presenting every case, no matter how petty, in which a person was charged with crime, to the consideration of the inquisitorial body, or else of seeing the defendant, convicted in the district court, discharged in the circuit court. Therefore, where formerly a grand jury sat one or two weeks in a term, it was kept in session throughout the entire term of court. Fortunately, District Magistrate Alexander Lindsay, jr., showed rare judgment and tact, proceeding as far as possible under the old practice, and, therefore, only upon appeals from his decisions were indictments made necessary. The Territory, not being allowed by statute an appeal where a consti-

tutional question was involved, as is often allowed in other States and Territories in the Union, was forced and compelled to await such time as the question could properly be brought up by a person claiming to be illegally imprisoned and restrained of his liberty, and it was not until five months after the decision in the Wa Sin case that the question was presented before the circuit court of this circuit, upon the application for a writ of habeas corpus by one Goto. Upon the hearing Goto was discharged by Judge Gear, on the ground that he had not been indicted for a misdemeanor, and thereupon a writ of error was sued out by this department from the supreme court of the Territory, before which tribunal the question is now pending.

In view of the foregoing, should the supreme court of this jurisdiction affirm the decision of Judge Gear, necessary legislation will be suggested to the next legislature to remedy the defect in the law, as only by such legislation will it be possible to handle the criminal business of this Territory in a proper manner.

THE POLICE DEPARTMENT.

By A. M. BROWN.

The police administration of this Territory is most broad and comprehensive in its scope and duties.

HIGH SHERIFF.

The high sheriff, appointed by the governor with the approval of the senate, is the chief of police of the Territory, and has, subject to the supervision and control of the attorney-general, the supervision and control of the sheriffs and subordinate officers throughout the Territory.

It is the duty of the high sheriff and of the several sheriffs and deputy sheriffs, within their respective jurisdictions, to preserve the public peace, to have charge of all jails and prisons, to safely keep all persons committed to their charge, to execute all lawful precepts and mandates directed to them by any judge or court, to arrest fugitives from justice as well as all criminals and violators of the laws.

DEPUTY SHERIFFS OF THE TERRITORY.

The law provides for the appointment by such high sheriff of two deputies, who are authorized to do or perform any act or thing required by law to be done or performed by such high sheriff.

SHERIFFS OF ISLANDS.

The islands of Hawaii, Maui, Molokai, Lanai, and Kahoolawe (the four latter being all under one jurisdiction), and Kauai have each a sheriff, appointed by the high sheriff with the approval of the attorney-general, who has the care, supervision, and control of the police within their respective jurisdictions, subject to the superior control of the high sheriff and the attorney-general.

DEPUTY SHERIFFS OF DISTRICTS.

Sheriffs of islands, in turn, have the appointment, subject to the approval of the high sheriff, of a deputy sheriff and such police officers as the needs of the different judicial districts of their island require.

DUTIES OF SHERIFFS AND DEPUTY SHERIFFS AS PROSECUTING ATTORNEYS.

It is one of the duties of the sheriffs and deputy sheriffs to appear and prosecute before the district magistrate in their respective districts all criminal cases, whether they be cases within the jurisdiction of such district magistrates to hear and determine (to-wit, cases where the maximum penalty does not exceed one year) or cases where the penalty exceeds one year, which come before such district magistrate for hearing and committal to the circuit court for trial by jury.

These duties require a high standard of intelligence and legal ability on the part of such sheriffs and deputies.

ISLAND OF OAHU.

At Honolulu, the capital of the Territory, is located the headquarters of the police department and the offices of the high sheriff and his two deputies. Arthur M. Brown, an Hawaiian, born of American parentage, appointed June 14, 1900, is the present high sheriff. Charles F. Chillingworth, an Hawaiian, appointed June 14, 1900, holds the position of first deputy sheriff. Albert McGurn, an Hawaiian, appointed June 14, 1900, holds the position of second deputy sheriff.

The uniformed police force of Honolulu consists of 45 foot police, together with 15 mounted officers and such special police, detectives, and clerks as the work of the department requires.

From the days of the monarchy the rank and file of the foot police in Honolulu, as well as in outlying districts, have been drawn from the native Hawaiians, who have proved themselves most efficient for this class of work. They are almost without exception men of large physique, quiet and sober in their habits, well educated under the splendid school system of this Territory and most amenable to discipline.

The uniform of these officers consists of a dark-blue blouse, white duck trousers, and dark-blue helmet, together with regulation police buttons, club, and belt.

Owing to the extended area of Honolulu a mounted force is necessary to properly police the outlying portions of the city. This force of 15 men, under the immediate control of Lieutenant Leslie, is a valuable adjunct to the force.

The officers are uniformed and the horses equipped after the style of United States cavalry. They receive a monthly pay of \$95, and are required to furnish their own horses and equipment and maintain the same.

Both foot and mounted police are thoroughly drilled in military tactics and the use of firearms, Springfield rifles being used by the foot police and Winchester .45-.70 carbines by the mounted police. Weekly practice at target shooting has brought this force to a high degree of efficiency in marksmanship.

The good results of such training was shown a few months ago when about 1,800 Japanese laborers on the Oahu sugar plantation, about 12

miles from Honolulu, went on a strike and threatened violence to the manager and his assistants. Fifteen mounted officers and 30 foot police, uniformed, armed, and prepared for any emergency, were soon at the plantation and the strikers dispersed. The police remained on duty for two days, when the strikers, realizing that their unjust demands would not be met, returned to work.

This is cited only as an example of what a few men in uniform, thoroughly trained and determined, can accomplish against an unorganized mob.

The sheriffs, deputy sheriffs, and police in the districts outside of Honolulu are uniformed in khaki, similar to the uniform of the United States Army.

Following is a brief statement of the strength of the police force throughout the Territory and the monthly rate of pay received.

HONOLULU.

Police headquarters:	
High sheriff	\$250.00
First deputy sheriff	200.00
Second deputy sheriff	150.00
Senior captain	150.00
First watch:	
Captain	85.00
Lieutenant	75.00
12 officers	each.. 70.00
Second watch.	
Same as first watch.	
Third watch.	
Same as first watch.	
Mounted police.	
Lieutenant	115.00
15 officers	each.. 95.00
3 clerks, receiving station	do... 90.00
3 turnkeys	do... 85.00
3 patrol wagon drivers	do... 80.00
2 court officers	do... 80.00
2 Chinese officers	do... 60.00
2 Japanese officers	do... 60.00
2 detectives	do... 100.00
8 special police	do... 75.00
Physician, receiving station	100.00

KOOLAUPOKO.

Deputy sheriff	75.00
2 officers	each.. 40.00
Jailer	40.00

KOOLAULOA.

Deputy sheriff	75.00
2 officers	each.. 40.00
Jailer	40.00

WAIALUA.

Deputy sheriff	75.00
2 officers	each.. 40.00
Jailer	40.00

WAIANAE.

Deputy sheriff	75.00
2 officers	each.. 40.00
Jailer	40.00

EWA.

Deputy sheriff	\$100.00
4 officers	each.. 40.00
Jailer	40.00

POLICE CALL-BOX SYSTEM.

The city of Honolulu is equipped with 100 Gamewell police-call boxes, which form a very valuable adjunct to the force, enabling officers on duty to be in constant touch with police headquarters.

PATROL WAGON.

At police headquarters, in Honolulu, is stationed an up-to-date rubber-tired patrol wagon with two pairs of horses, one team for day duty, another for night service. This wagon is used for the transportation of prisoners as well as an ambulance for injured persons.

ISLAND OF HAWAII.

The sheriff of the Island of Hawaii, L. A. Andrews, an Hawaiian born of American parents, was appointed June 14, 1900.

Each of the eight judicial districts on this island is presided over by a deputy sheriff appointed as heretofore mentioned with police officers under each of such deputies.

Police headquarters on this island are located at Hilo, the monthly rate of pay being as follows:

Sheriff.....	\$200.00
Sheriff's clerk.....	100.00

SOUTH HILO.

Deputy sheriff	150.00
2 captains	each.. 75.00
2 lieutenants.....	do. 60.00
18 officers	do. 50.00
Jailer	80.00
Deputy jailer	50.00
4 guards.....	each.. 30.00

NORTH HILO.

Deputy sheriff	70.00
2 officers	each.. 40.00

KAU.

Deputy sheriff.....	80.00
2 officers	each.. 40.00
Jailer.....	40.00

PUNA.

Deputy sheriff	60.00
4 officers	each.. 40.00
Jailer	40.00

ISLAND OF MAUI.

The sheriff of this island, L. M. Baldwin, an Hawaiian born of American parents, was appointed June 14, 1900.

Each of the five judicial districts of this island is presided over by a deputy sheriff and police officers.

Police headquarters on this island are located at Wailuku, and the monthly rate of pay is as follows:

Sheriff	\$187.50
Sheriff's clerk.....	80.00

WAILUKU.

Deputy sheriff	125.00
Captain.....	60.00
10 officers	each.. 50.00
Jailer	75.00
2 deputy jailers	each.. 50.00
Jailer.....	40.00

HAMAKUA.

Deputy sheriff	80.00
Captain.....	50.00
4 officers.....	each.. 40.00
Jailer.....	40.00

SOUTH KOHALA.

Deputy sheriff.....	75.00
2 officers	each.. 40.00
Jailer.....	40.00

NORTH KOHALA.

Deputy sheriff	80.00
4 officers.....	each.. 40.00
Jailer.....	40.00

NORTH KONA.

Deputy sheriff	80.00
4 officers	each.. 40.00
Jailer.....	40.00

SOUTH KONA.

Deputy sheriff.....	80.00
2 officers.....	each.. 40.00
Jailer.....	40.00

MAKAWAO.

Deputy sheriff	80.00
Captain.....	50.00
4 officers.....	each.. 40.00
Jailer	40.00

LAHAINA.

Deputy sheriff.....	80.00
4 officers.....	each.. 40.00
Jailer	40.00

HANA.

Deputy sheriff.....	80.00
2 officers.....	each.. 40.00
Jailer	40.00

KIPAHULU.

Deputy sheriff.....	40.00
2 officers.....	each.. 30.00
Jailer	35.00

ISLAND AND DISTRICT OF MOLOKAI.

Deputy sheriff.....	\$60.00
4 officers.....each..	25.00
Jailer.....	30.00

LEPER SETTLEMENT (ISLAND OF MOLOKAI).

Captain.....	35.00
4 officers.....each..	20.00
Jailer.....	25.00

ISLAND OF KAUAI.

The sheriff of this island, J. H. Coney, is an Hawaiian, appointed June 14, 1900.

Each of the five judicial districts of this island is presided over by a deputy sheriff and police officers.

The police headquarters are located at Lihue. The monthly rate of pay being as follows:

Sheriff.....	\$175.00
Sheriff's clerk.....	60.00

LIHUE.

Deputy sheriff.....	125.00
Captain.....	50.00
4 officers.....each..	40.00
Jailer.....	60.00
2 guards.....each..	40.00

KOLOA.

Deputy sheriff.....	70.00
3 officers.....each..	40.00
Jailer.....	40.00

WAIMEA.

Deputy sheriff.....	80.00
4 officers.....each..	40.00
Jailer.....	40.00

KAWAIIHAU.

Deputy sheriff.....	70.00
2 officers.....each..	40.00
Jailer.....	40.00

HANALEI.

Deputy sheriff.....	70.00
2 officers.....each..	40.00
Jailer.....	40.00

JAILS AND PRISONS.

Each district throughout the Territory has its jail and court-house, with a commissioned police officer as a jailer. These jails, with the exception of those at Hilo, Island of Hawaii; Wailuku, Island of Maui, and Lihue, Island of Kauai, are merely receiving stations or places of detention for persons arrested and awaiting trial before the district magistrate.

At Hilo, Island of Hawaii; Wailuku, Island of Maui, and Lihue, Island of Kauai, the majority of prisoners convicted on these respective islands of misdemeanors (offenses where the maximum penalty does not exceed one year) are confined.

In the combined jail and prison in Honolulu are confined all prisoners convicted of misdemeanors of the island of Oahu and all others convicted of felony throughout the Territory.

PRISON LABOR.

The laws of this Territory impose hard labor upon all prisoners, which work for the most part consists of labor upon the roads, Government parks, and in the stone quarries.

OAHU PRISON.

This institution, located at Honolulu, is capable of confining 400 prisoners. It is presided over by a warden, William Henry, an American, appointed by the high sheriff, June 14, 1900, at a monthly salary of \$200. Serving under such warden are the following:

	Per month.
Deputy warden	\$150
3 turnkeys.....	each.. 75
24 guards.....	do... 50

A salary of \$100 per month is paid for the daily attendance of a physician to attend to any sick prisoners.

Complete sanitary arrangements, good food, and plenty of exercise reduce the number of sick to a minimum.

About 300 prisoners are at present confined in this institution.

About 150 of these prisoners are employed upon public works in gangs of 15, each gang under the direct supervision of a guard receiving a monthly compensation of \$75.

They are worked nine hours a day, from 6 a. m. to 4 p. m., with an hour for rest and lunch at 12 m.

The remaining convicted prisoners are employed in various capacities about the prison.

The committed men are merely detained awaiting trial.

The legislature of 1904 appropriated for the year ending June 30, 1905, the sum of \$52,272 for the support and maintenance of prisoners throughout the entire Territory.

Also the sum of \$13,800 for police incidentals for the same period.

The entire estimated cost of the police department throughout the Territory, including support and maintenance of prisoners for the year ending June 30, 1905, is \$299,082.

For the year ending June 30, 1904, there were imposed by district magistrates throughout the Territory fines and costs amounting to \$65,214.20. Of this amount, including bails forfeited, \$50,995.75 was paid, the balance being cases appealed or those worked out at hard labor at the rate of 50 cents per day.

In this connection it should be stated that any person working out a fine may at the end of a year's time appear before a district magistrate, take the poor debtor's oath, and secure his discharge from such sentence.

DRUNKENNESS.

The increase in the number of licensed liquor saloons throughout the Territory has not, and the statistics bear out such fact, increased drunkenness.

The care exercised in granting such licenses has insured the proper conduct of such saloons, and such saloons have largely done away with the illicit sale of liquor.

GAMBLING.

The gambling laws are vigorously enforced, as the following statistics show:

Total arrests throughout the Territory	3, 138
Total convictions.....	2, 250

Of this number there were arrested in Honolulu 1,678.

Gambling to a certain extent among the Chinese of this Territory is constantly carried on in the shape of lotteries, and so conducted that convictions under our present laws are hard to secure.

The work done by the police department throughout the Territory shows for itself in the statistics hereto attached.

While a considerable number of crimes of violence have occurred during the past year, there has been a decrease in the ordinary run of offenses.

The number of prisoners at Oahu prison during the year past has averaged 272, the largest number being 324, on May 5, 1904, the lowest number being 232, on July 6, 1903.

The total number of days of imprisonment, classified, is as follows:

	Days.
Criminal offenses.....	61, 065
Misdemeanor offenses	24, 506
Committed	14, 048
Total	99, 619

The total imprisonment of prisoners reduced will show the daily average to have been—

Criminals.....	167
Misdemeanors.....	67
Committed.....	38
Total	272

Classification of the daily incarceration shows that 61.39 per cent were criminals, 24.64 per cent were misdemeanors, and 13.97 per cent were committed.

The average sick was 13.

There have been received during the twelve months ending June 30, 1904, 196 United States prisoners, for the support of which \$6,816.47 has been paid to this department.

The Hilo jail has had an average of 63 prisoners, mostly those convicted of misdemeanor offenses. The Wailuku jail has had an average of 24, mostly convicted of misdemeanor offenses. The Lihue jail has had an average of 15.

These prisoners, under the direction of the superintendent of public works, are worked upon the government roads and in the stone quarries.

Arrests made throughout the Territory of Hawaii and disposition of same in the district courts for the year ending June 30, 1904.

FOR DRUNKENNESS.

Islands.	Total arrests.	Sex.		Nationality.							Discharged.	Convicted.	Imposed.		Bails forfeited.	Fines and costs paid.	Total amount imposed.
		Male.	Female.	Hawaiians.	Americans.	Portuguese.	Chinese.	Japanese.	Porto Ricans.	Others.			Fines.	Costs.			
Oahu	1,060	1,020	40	394	234	51	2	111	30	238	50	1,010	\$2,547.00	\$809.60	\$1,026.00	\$2,276.15	\$3,356.60
Hawaii ..	252	244	8	122	22	39	1	33	22	13	33	219	416.00	161.55	389.00	244.00	577.55
Maui and Molokai	151	149	2	91	19	6	.....	22	8	5	25	126	259.00	49.50	155.00	215.50	308.50
Kauai ...	18	18	..	6	1	1	.....	4	5	1	1	17	31.00	18.00	21.00	45.00	49.00
Total.	1,481	1,431	50	613	276	97		3	170	65	257	109	3,253.00	1,038.65	1,591.00	2,780.65	4,291.65

FOR GAMBLING.

Oahu	2,040	2,035	5	89	6	11	1,531	377	17	9	756	1,284	\$8,073.00	\$801.35	\$3,211.00	\$3,935.20	\$8,874.35
Hawaii ..	554	551	3	40	...	13	216	254	29	2	100	454	274.00	73.95	2,055.50	316.95	347.95
Maui and Molokai	475	471	4	45	3	..	186	214	27	...	153	322	1,062.00	20.20	983.00	597.20	1,082.20
Kauai ...	157	156	1	14	...	..	57	84	2	...	19	138	160.00	6.00	1,130.00	133.00	166.00
Total.	3,226	3,213	13	188	9	24	1,990	929	75	11	1,028	2,198	9,569.00	901.50	7,379.50	4,982.35	10,470.50

SELLING SPIRITUOUS LIQUOR WITHOUT A LICENSE.

Oahu	80	71	9	12	2	10	27	22	..	7	20	60	\$5,000.00	\$59.00	\$600.00	\$1,270.80	\$5,059.00
Hawaii ..	26	21	5	2	...	1	7	16	...	...	8	18	1,350.00	39.70	450.00	574.35	1,389.70
Maui and Molokai	33	32	1	...	3	4	3	15	3	5	21	12	1,250.00	18.10	100.00	403.40	1,268.10
Kauai ...	14	13	1	1	...	...	7	6	...	...	7	7	435.00	16.10	200.00	3.00	451.10
Total.	153	137	16	15	5	15	44	59	3	12	56	97	8,035.00	132.90	1,350.00	2,251.55	8,167.90

NATIONALITY AND SEX.

Islands.	Total arrests.	Sex.		Nationality.								Disposition.	
		Male.	Female.	Hawaiians.	English.	Americans.	Portuguese.	Chinese.	Japanese.	Porto Ricans.	Others.	Discharged.	Convicted.
Oahu	5,513	5,281	232	1,144	40	447	297	1,868	1,059	222	436	1,731	3,782
Hawaii	2,027	1,921	106	426	3	42	194	322	738	248	54	617	1,410
Maui and Molokai	1,371	1,308	63	354	1	48	58	279	522	98	11	498	873
Kauai	491	473	18	89	.....	7	10	102	232	45	6	160	331
Total	9,402	8,983	419	2,013	44	544	559	2,571	2,551	613	507	3,006	6,396

AMOUNT OF FINES AND COSTS IMPOSED AND PAID.

Islands.	Total arrests.	Discharged.	Convicted.	Fines.	Costs.	Bails forfeited.	Fines and costs paid.	Total amount imposed.
Oahu	5,513	1,731	3,782	\$24,013.50	\$3,090.05	\$7,123.00	\$12,720.35	\$27,103.55
Hawaii	2,027	617	1,410	3,963.00	1,165.00	6,197.50	2,450.55	5,128.00
Maui and Molokai	1,371	498	873	6,444.00	317.00	1,646.50	3,692.30	6,761.00
Kauai	491	160	331	1,650.00	245.20	1,936.00	876.50	1,895.00
Total	9,402	3,006	6,396	36,070.50	4,817.25	16,903.00	19,739.65	40,887.75

Arrests made throughout the city of Honolulu and disposition of same in the district court for the year ending June 30, 1904.

FOR DRUNKENNESS.

Months.	Total arrests.	Sex.		Nationality.								Discharged.	Convicted.	Imposed.		Bails forfeited.	Paid.	Total amount imposed.
		Male.	Female.	Hawaiians.	English.	Americans.	Portuguese.	Chinese.	Japanese.	Porto Ricans.	Others.			Fines.	Costs.			
1903.																		
July	137	132	5	49	6	29	5	.....	13	1	34	5	132	\$303.00	\$89.30	\$102.00	\$277.30	\$392.30
August	107	100	7	43	3	20	5	.....	18	1	18	2	105	275.00	75.70	72.00	259.60	350.70
September ..	102	94	8	42	1	19	8	.....	1	9	20	6	96	224.00	75.20	126.00	227.10	299.20
October	73	68	5	28	1	12	3	.....	11	2	16	5	68	178.00	58.30	46.00	180.10	236.30
November ..	68	68	..	38	1	13	3	.....	7	..	6	2	66	177.00	57.40	42.00	168.00	234.40
December ..	83	83	..	25	..	21	7	.....	1	3	6	20	3	224.00	69.90	135.00	198.00	293.90
1904.																		
January	60	58	2	28	1	11	2	.....	6	..	12	5	55	150.00	47.60	35.00	135.15	197.60
February	97	94	3	32	5	19	10	.....	6	3	22	4	93	229.00	74.40	96.00	201.40	303.40
March	67	66	1	25	1	20	3	.....	6	..	12	1	66	143.00	47.20	96.00	106.00	190.20
April	56	55	1	17	1	17	1	.....	6	2	12	1	55	147.00	47.00	42.00	123.00	194.00
May	120	116	4	29	1	33	2	.....	15	11	29	9	111	315.00	102.50	133.00	226.40	417.50
June	59	57	2	20	..	20	1	.....	1	3	14	2	57	141.00	48.10	47.00	116.10	189.10
Total....	1,029	991	38	376	21	234	50	.....	2	101	30	215	45	2,506.00	792.60	972.00	2,218.15	3,298.60

FOR GAMBLING.

1903.																		
July	79	79	..	2	..	..	..	42	35	..	..	13	66	\$1,213.00	\$55.45	\$130.00	\$1,005.00	\$2,168.45
August	107	107	..	7	..	..	..	70	29	..	1	65	42	330.00	8.70	360.00	32.00	338.70
September ..	41	41	..	4	..	..	..	36	1	..	..	11	30	197.00	24.40	51.00	206.30	221.40
October	63	63	..	1	..	..	..	50	1	11	..	43	20	82.00	22.00	..	94.00	104.00
November ..	163	163	..	..	..	..	1	137	25	..	..	22	141	270.00	64.00	472.00	234.00	334.00
December ..	77	77	..	..	..	..	..	60	17	..	..	21	56	301.00	35.20	42.00	259.00	336.20
1904.																		
January	121	121	..	3	..	1	2	104	5	2	4	77	44	164.00	27.60	78.00	132.30	191.60
February	103	102	1	4	..	..	..	86	13	..	..	32	71	342.00	54.20	87.00	388.20	396.20
March	259	259	..	4	..	2	3	224	24	1	1	93	166	921.00	101.40	462.00	181.10	1,022.40
April	131	131	..	32	..	3	1	44	50	1	..	28	103	635.00	48.70	460.00	406.70	683.70
May	381	378	3	9	..	..	2	337	30	..	3	195	186	1,951.00	168.30	170.00	372.30	2,119.30
June	153	153	..	12	..	..	2	128	9	2	..	73	80	952.00	76.70	20.00	350.00	1,028.70
Total....	1,678	1,674	4	78	..	6	11	1,240	239	17	9	673	1,005	7,358.00	686.65	2,332.00	3,660.90	8,044.65

SELLING SPIRITUOUS LIQUOR WITHOUT A LICENSE.

1903.																		
July	9	8	1	..	..	..	2	3	3	..	1	2	7	\$900.00	\$10.60	.....	\$101.00	\$910.60
August	2	2	..	..	..	..	2	..	..	..	..	..	2	..	..	\$200.00	..	..
September ..	3	2	1	..	..	..	..	1	2	..	..	..	3	100.00	1.30	100.00	..	101.30
October	1	1	..	..	..	..	..	..	..	..	1	..	1	100.00	1.00	..	101.00	101.00
November ..	8	8	..	3	..	..	..	5	..	..	..	2	6	400.00	9.00	..	..	409.00
December ..	1	..	1	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..
1904.																		
January	3	3	..	..	..	..	..	2	..	..	1	..	3	300.00	2.70	..	..	302.70
February ....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
March	6	4	2	1	..	..	..	..	4	..	1	..	6	800.00	5.00	100.00	..	805.00
April	13	12	1	3	..	1	2	4	3	..	..	5	8	600.00	5.70	100.00	101.00	605.70
May	11	10	1	1	..	1	1	2	4	..	2	2	9	900.00	6.40	100.00	353.00	906.40
June	4	3	1	..	..	3	..	..	..	..	1	2	2	200.00	1.30	..	..	201.30
Total....	61	53	8	9	..	2	10	17	16	..	7	13	48	4,300.00	43.00	600.00	656.00	4,343.00

DEPARTMENT OF SURVEY.

By WALTER E. WALL.

Owing to the complicated system of land division in the different islands of Hawaii and the irregular formation or nature of the country it requires more than mere knowledge of engineering principles to make a survey that will establish accurately the boundaries of the government and private lands. Complications often arise that make surveys slow and costly, and it often requires patience and painstaking efforts on the part of the surveyor in running out or reestablishing the boundaries of the old surveys. The data furnished for the purpose of determining the magnetic declination and the rate of change from year to year to assist in making these surveys has been of much value.

This will be better understood from the following mention of the original claims and divisions of the lands: The land was originally held by the Hawaiians in such manner as the chiefs or kings permitted, and the ownership was continued by them when the government issued titles.

The primary division of the land was the "Ahupuaa." This, as a general rule, took the form of a long strip running from the seashore to the mountains, the object being to give the chief who held it with the approval of the reigning sovereign the various products of the sea and the soil. The tenants under the chiefs occupied their small lots with more or less permanence by rendering military and agricultural service as circumstances required. It is therefore seen that the lands were originally held under a regular system. The great land division took place during the reign of Kamehameha III in 1846-1849, the records of which, briefly stated, show the following:

1. Certain lands which were owned or reserved by the King were for a time treated as private property. The act of the legislature of 1864 made these inalienable public lands known as "Crown lands," the revenue of which was to go to the reigning sovereign.

2. The chiefs retained ownership to the better part of the ahupuaas which had been held by them in fief.

3. The common people were given fee-simple title to such small lots within the ahupuaas as they had occupied and improved. The number of these titles were over 11,000, and many of them covered several separate lots. These lots are commonly referred to as "kuleanas," though they are recorded as "Land commission awards."

4. The remaining lands, most of which were given up by the chiefs in commutation for the acquirement of title to the lands retained, constitute the government lands.

5. Portions of the government lands (No. 4) sold since the above division are known as "Royal patents" and "Grants."

The government grants issued prior to the beginning of the Survey Department numbered about 3,000.

Perhaps a fair estimate of the number of ahupuaas would be about 2,000. These have subdivisions called "ilis," which are not always held by the owner of the ahupuaa.

The above gives the main features of the land system, though many details are necessarily omitted here for lack of space.

Considering the fact that such descriptions as were incorporated in

the above titles were magnetic spot surveys, each quite independent of the other, and this, too, with the local attraction prevalent everywhere, one can not help but realize what an arduous work it has been to bring the mapping of these lands up to the present condition.

There were no general surveys, although the kuleanas of a few sections were platted together. Fortunately the names of the abutting lands or owner is generally given. Most of the larger lands and ahupuaas were awarded by name only, with the understanding that the ancient boundary should be preserved. Owing to the many natural divisions or sections established through the formation of the islands, a great many maps have been made, considering the size of the country. The maps registered in the office number 2,252. Constant use is made of the records of the office by the courts of law and the legal fraternity. Property owners are daily consulting the maps to get information on the location of their lands. This is due to a great extent to boundary disputes arising from the lack of boundary fences. Comparatively little fencing has been done and many ancient boundaries are lost which require expert surveyors to reestablish. There is much important work ahead for the Department in running boundaries of Government tracts, locating the kuleanas or small private lots, which are almost invariably to be found in the most desirable or fertile part of the land, preparatory to laying out such lands into homesteads as they become available. Some idea of the condition and value of the records of this office may be taken from the fact that it took but a few months to furnish the tax assessor with detail maps showing practically all of the original titles on the island of Oahu. The block plans of the city of Honolulu showed frontages, areas, and sufficient data to very materially assist the assessor in his work of appraising values. The various public improvements, such as street widenings, extensions, grading, harbor developments, etc., require many surveys and descriptions to be made. Surveys, descriptions, and plans are made also for every sale or lease of government land.

A great amount of information is furnished to private parties, as well as the various departments of the government, on a variety of matters pertaining to lands. This part of the work seems to be steadily increasing. An important work is the arranging and indexing of records, in order that the maps and documents may be found with the least delay possible. We are now engaged in revising the indices, and cross indexing in a carefully planned manner.

This office has furnished local standard and Greenwich time. Since the operating of the time signal comparatively few chronometers are rated for navigators. Navigators of various classes of vessels often call for time comparisons in order to correct the rates to their chronometers.

In addition to the land surveys all the important harbors have been surveyed and mapped. Many of these have been published by the United States Hydrographic Office.

The triangulation, which consists of a carefully selected network of triangles measured with precision in thorough accordance with the methods of the United States Coast and Geodetic Survey, will, when substantially marked on the ground, serve the same purpose to our lands that the meridian and parallels do in the United States land system. These points will serve as the foundation to geological, hydrographic, and topographical surveys in the future.

METEOROLOGICAL WORK.

By ROBERT C. LYDECKER.

Although the United States Weather Bureau intended to assume charge of the weather service here on the 1st of July, it was found to be impracticable, owing to the late arrival of Director A. M. Ashley, esq., and the many difficulties and delays experienced by him in obtaining satisfactory offices.

Records of daily rainfall have been received from 44 stations on the Island of Hawaii, 39 reporting for the full year, the others having been established during that time, and on account of the sickness of the observer, one station, not included in the above figures, was discontinued. Twelve stations have reported from Maui, being one less than the previous year. A station was established in October, 1903, at Kemoku, Lanai, and reports have been received regularly since then, this being the only station on that island. Twenty-seven stations on Oahu have made full reports for the year, and 2 stations discontinued with but partial records. The Island of Kauai has furnished reports from 15 stations the full year, and 2 were discontinued after a few months, making a total for the group of 99 rain-record stations reporting at the close of the year.

Six observers on Hawaii are furnished with maximum and minimum thermometers, 4 of whom have reported for the full year, 1 dropped out after ten months' service, and the other began only in January, 1904.

One observer reports from Lanai, 1 from Maui, and 4 on Oahu, making a total of 11 temperature reports. Several of these observers report direction of wind and brief notes on the weather. Three observers also make daily observations of humidity, and 1, in addition to the foregoing, barometer readings.

The observations at the central office at 1508 Alexander street, Honolulu, have been kept up in the usual way, involving 39 entries a day. This closes the twenty-first year of the series. The publication of these observations, as well as those at the outstations, in permanent form, begins with the year 1892 and ends with the year 1903. What steps will be taken in reference to the publication of the records from January 1 of the present year until the United States Weather Bureau assumes charge of the service, a subject which will be referred to in a succeeding paragraph, has not yet been decided.

Every month a summary, including the averages and extremes, and comparison with normal meteorological conditions, was published in the local papers. This includes also the average temperature and other items from outside stations, especially the percentage of district rainfall as compared with the normal. One paper also publishes the monthly rainfall throughout the group.

The daily conditions of the weather were telephoned to three daily papers—two evening and one morning; the latter was also furnished with a forecast for the day. This paper also published a weekly meteorological record. All three papers were furnished with a weekly tide table.

A copy of the monthly summary and rainfall, together with a monthly record of observations, on their own form, was sent to the United States Weather Bureau at Washington each month and pub-

lished by the Bureau in its official organ, the *Monthly Weather Review*. As this publication is sent to all the leading observatories, weather offices, and scientific societies throughout the world, our reports had a wide circulation. The United States Hydrographic Office also received monthly reports from this office. Our published annual report for 1903 was, as has been the custom, sent to the principal observatories and weather offices abroad and publications received from them in exchange.

The automatic tide gauge in Honolulu Harbor is under the charge of this office and has been in continuous service, this being one of the important stations of the world. Duplicates of the records are sent to the Tidal Division of the United States Coast and Geodetic Survey twice a year. The mean sea level is also an especial matter of study and the rising and falling of the water in our artesian well subterranean reservoir is noted.

In expectation of the United States Weather Bureau assuming charge of the weather service in the Territory July 1, 1904, the Territorial legislature made no appropriation to support the local service after that date. The work of this office will, therefore, officially cease at that time, but in view of the fact that the United States Bureau is not prepared to take up the work and that a long series of records may remain unbroken the meteorologist will keep up the service as before, in addition to his regular duties in the survey office proper, until such time as the United States Weather Bureau is in position to take it over, which it is expected will be in about two months' time, the United States observer being now on the ground and making every effort to establish his office as soon as possible.

In submitting this, the final report of the Territorial service, a brief summary of the work accomplished seems fitting. From a small beginning and through the untiring efforts of my predecessor, Prof. C. J. Lyons, this station occupies an important place in the world's climatology. Its records are of no little value, and are carefully studied by meteorologists the world over. Situated as we are, near the northern edge of the trade-wind belt, it possesses advantages unique in themselves and opportunities not to be found elsewhere.

Recognizing the importance of the Hawaiian Islands as a meteorological station and the great benefit the study of its climate would be to the meteorological world was doubtless what prompted Professor Lyons to assume the self-imposed task of a systematic record and study, and that his efforts have not been in vain is shown by the appreciation with which they have been received. As to the beginning of these observations Professor Lyons, then an assistant in the government survey, reported to the surveyor-general, under date of April 24, 1890, in part, as follows:

The government survey observations extend back for only a period of seven years for rainfall and about ten for barometer, etc. It may be well in this connection to say that while no especially authorized series of observations has ever been instituted, a beginning has been made in this branch of the public service, viz, the survey, from a conviction that it was a public duty and that this government should to some extent act in unison with all other civilized governments in recording and communicating to the world generally the meteorological facts of the country.

This first report was not so much a report of work done as a gathering up into practical shape of such data as could be obtained from various private records. Mr. Lyons first began keeping temperature

and barometer records in 1874, and from that time until 1882 records were kept as circumstances would permit, being interrupted from time to time by absence caused by surveying duties. In 1882 temperature and barometer observations were undertaken in a more systematic manner, to which were added gradually those of wind and weather. In 1883 observations of the above-mentioned phenomena, with the addition of the rainfall, were begun at the present Weather Bureau station and have continued until the present time. In 1890 humidity observations were added to the above, and in the same year the outside stations began their regular rainfall reports, several stations also reporting temperature, which reports are still received.

Other than the reports published in 1890, annual reports of detail have been published embracing 1892-1903. In addition to the reports mentioned, a report was published in 1900 of rainfall only, giving the entire monthly rainfall of each station from the beginning of observation, when such beginning was before 1897, and coming down to the close of 1900. In some cases this covers a period of twenty or more years. This report gives the normal average for each month of the year, and the average yearly rainfall for each station. As this report covers the entire group, it was doubtless very useful to the agricultural interests of the Territory.

The expense necessary to carry on the work was, to 1895, borne by the survey department. The legislature in that year, recognizing the importance of the work, made a regular appropriation for office expenses, to which, in 1898, was added a salary appropriation for the meteorologist, both of which have since been continued.

Considering the limited means and facilities at its command, the office feels a pardonable pride in the record it has made, the results achieved, and the benefits derived for the islands and the meteorological world generally.

ENTOMOLOGY.

By R. C. L. PERKINS.

The chief work of the economic entomologists of these islands may be divided into two parts: (1) The prevention of the importation of injurious insects or plant diseases from other countries. (2) The destruction of injurious insects already present in the islands. It is quite clear that unless the work mentioned in the former section be faithfully and rigorously executed there is little or no profit in the maintenance of an entomological staff here. Our conditions in Hawaii are not similar to those of any other country where attention is paid to economic entomology, and consequently means adopted with success for the control of certain pests elsewhere are not applicable here except in few cases.

There are obvious reasons for this:

(1) The equability of our climate brings it about that many of our injurious introduced insects, which in their own country appear but for a short season, producing only one or at most two or three broods a year, are known here to produce generation after generation, with only short periods of rest. Hence, multiplication of a pest is extraordinarily rapid as compared with the same in its native home.

(2) When a new insect pest is introduced here it usually arrives immune from parasites, disease, or other restraining causes. In some few cases, owing to the presence of native insects here allied to the introduced one, and to the fact that these native insects are restrained by their own parasites, natural enemies, or diseases, the newcomer is attacked by the enemy of the allied native species and is partly or entirely restrained from doing injury. The chance of such an enemy being found here ready to attack the newcomer is generally very small, owing to the extraordinary character of the native fauna, in which whole groups and families of insects, both injurious and beneficial, are not represented by a single species. This fact alone renders the situation totally unlike that of any other country where economic entomology is systematically practiced. There are disadvantages in being so situated, but likewise great advantages, which it is not necessary to consider here.

(3) Very many of our insects are not at all confined to valuable plants, but also live and thrive on all sorts of common weeds or trees of no special value. Hence, however well the agriculturist clears his own property of a pest, he is liable to be besieged with swarms of the same insect from the rough country round about him, since they naturally flock to the more attractive diet provided by cultivation.

Only quite recently has a staff of entomologists and suitable quarters and apparatus for their work been provided for in this Territory. From the date of annexation to 1902, and indeed for years prior to annexation, Mr. Albert Koebele worked unassisted both here and on his missions. When present in these islands he inspected imported plants; during his long absences inspection was made by the acting commissioner, but not by a qualified entomologist.

In 1902, when Mr. Koebele departed for Mexico, Mr. R. C. L. Perkins was appointed as a government official to inspect imported plants, and he also handled all the beneficial Mexican insects sent by Mr. Koebele, being employed to do so by the Hawaiian Sugar Planters' Association and that of the live-stock breeders of these islands. In 1903 Mr. Koebele was appointed superintendent of entomology under the new board of commissioners, Mr. Perkins was made assistant superintendent, and two other entomologists and an assistant inspector were appointed. Half of the salaries and traveling expenses of the superintendent and two assistant entomologists are defrayed by the Hawaiian Sugar Planters' Association. Mr. Koebele and Mr. Perkins are now making investigations in Australia, while Prof. Alexander Craw, executive officer of the California State board of horticulture, has just been permanently engaged for work in this Territory.

FORESTRY IN THE TERRITORY.

By RALPH S. HOSMER.

The proper management of the forests on the several islands of the Territory is one of the large problems facing the Territory of Hawaii. For the successful development not only of sugar, the staple crop of the Territory, but also the other important agricultural industries, it is essential that there be an ample water supply. It is generally recog-

nized that, to insure beyond question a constant supply of water, the watersheds must be protected by a forest cover. Fortunately, in this Territory, the original forests remain over a considerable portion of the area where such protection is most needed, and, what is equally important, there exists an excellent public sentiment in regard to protecting them.

The native forests are admirably adapted for the conservation of moisture. Under the trees grow dense masses of rich, tropical vegetation, which make very nearly ideal conditions for retaining a large share of the heavy rainfall, and consequently preventing excessive run-off, resulting in alternating seasons of flood and drought. But the forest is easily susceptible to injury, especially from cattle. With grazing the undergrowth recedes, and even the trees, which for the most part are shallow-rooted, become weakened, and fall a prey to numerous destructive insects. For this reason it is necessary that grazing be prohibited in the forests, which are needed to protect and safeguard the watersheds, and this, in turn, leads to the necessity of creating forest reserves.

To administer to the best advantage the reserves to be set aside and to deal with the various forest problems which have to be solved in this Territory is the work of trained men, men educated in the profession of forestry. In part to meet this demand the Territory last year reorganized its department of agriculture and established the present bureau of agriculture and forestry, under the direction of a board of unpaid commissioners appointed by the governor. The division of forestry is under the direction of the superintendent of forestry, who, by the terms of the law, must be a professional forester of experience, and it is the intention to build up in the division a service of technically trained men, who shall be capable of handling to the best advantage the forest interests of the Territory.

Much creditable work in forestry has been done in the Territory in past years, both by the government and by individuals, but the establishment of the present service is a sufficiently important step to entitle Hawaii to a place among the States that are most active in the forestry movement. In the wide field for forestry work now open in the Territory, the first and immediate need is the creation of forest reserves on each of the main islands. Following a careful examination of the proposed reserve by the professional foresters of the division of forestry, recommendations are made by the board on the basis of which the governor will set apart areas of forest land as forest reserves.

Forest reserves having been set apart, the next step will be to establish a system of administration for them. This will include the organization of a forest-ranger service, the erection of suitable fences around the reserves, and the extermination of wild cattle and goats that may be within their limits. The administration of the reserves will rest with the division of forestry.

Following the creation of the reserves and the adoption of a comprehensive system of administration, another line of forestry work will be taken up. This is the planting of waste and barren places throughout the islands with forest trees. Much tree planting has already been done by individuals and corporations on their own lands. From the results of this work and from experiments with exotic trees, now in progress, much information will be available, so that when the time comes for extensive planting it will be definitely known what

kinds of trees are best adapted for the local conditions. In this work trees which are commercially important will be given the preference.

Other lines of work which are being undertaken by the division of forestry are the collection of information as to the character, extent, and distribution of the forests on the several islands, including forest maps; the collection of statistical and other facts relative to the forest products of the Territory; the gathering of an herbarium of the arborescent flora, and, in the library of the bureau, the collection of books on forestry.

The division of forestry maintains close and cordial relations with the Bureau of Forestry of the United States Department of Agriculture, and expects to receive material assistance in at least one line of work—that of assistance to private owners in the management of their forest lands, especially in making plantations.

So far as time and appropriations permit, the division of forestry stands ready to give its advice and assistance to persons desiring to plant, but later it is hoped that the Federal Bureau can furnish a man to assist in this work.

In these main lines of forestry work there is enough to keep busy for a number of years a much larger force than is now available.

With the general plan just outlined carried into effect, the outlook for forestry in the Territory is a bright one. The people are alive to the necessity of preserving the forests and to the fact that any considerable reduction of the existing forest area will endanger the prosperity of the Territory. The forest itself is such that, if protected by the creation of forest reserves, it can be brought into a satisfactory condition. The work of establishing and administering the forest reserves, as well as other forestry investigations, is being handled by a department of the Territory equipped for capably dealing with the problem.

The policy of setting aside tracts of land as forest reservations has been adopted by the trustees of the Bishop estate, who have set aside lands on the islands of Oahu and Hawaii for such purposes. Some of these reservations have been fenced in a substantial and effective manner, and fully protected and reserved for the general benefit of the districts in which they are located, and for the conservation of the water supply, while other tracts are only partially fenced in and protected.

In the Kawailoa-uka tract, on the Island of Oahu, and in the South Kona reservations, on Hawaii, the good effect of this protection is shown in a very marked degree in the new growth of young trees and underbrush.

There is another lot of Bishop estate lands which may possibly be set aside for forestry purposes in the future, upon the completion of some comprehensive plan by the government bureau having charge of these matters. These tracts of land, on the Islands of Kauai, Oahu, and Hawaii, are nearly all in the upper portions of the great interior valleys and in the existing forests, whose preservation is essential to the welfare of the general public and the estate. At the present time and with the limited information at hand it is impossible to give even an approximate estimate of areas of the proposed reservations, but it is believed a very large addition can be made without seriously impairing the revenue-producing areas of the estate lands.

In general, it may be said that it is the policy of the trustees of the Bishop estate to assist in the gradual development of the forest reservations on the islands whenever and wherever it can be done without prejudice to other valuable interests. In several cases in which leases have been made carrying certain water rights appurtenant to the land of the lessors, the forest tracts have been amply protected by strict clauses in the leases, and in future leases the same rule will be followed.

Bishop estate forest reservations.

	[Approximate areas.]	Acres.
Hawaii:		
Pahoehoe, Hilo		800
Keauhou, Kau		4,500
Kaiwiki, Hamakua		1,600
Kahauloa, South Kona		3,400
Keei, South Kona		2,900
Honaunau, South Kona		3,700
Keokea, South Kona		1,600
Total		18,500
Oahu:		
Kawailoa, Waialua		8,400
Paalaa-uka, Waialua		4,200
Waiawa, Ewa		4,100
Waiau, Ewa		1,500
Halawa, Ewa		1,800
Kalauao, Ewa		700
Total		20,700

Bishop estate's proposed forest reservations.

Ohau:	
Punaluu, Koolau	Mauka section.
Kalanui, Koolau	Mauka section.
Maunalua, Kona	Mauka section.
Waialae (2), Kona	Mauka section.
Hawaii:	
Honokane, Kohala	Upper valley.
Kaupulehu, North Kona	Mountain portion.
Kapua, South Kona	Mountain portion.
Kalalau, Hilo	Mauka section.
Kikala, Hilo	Mauka section.
Alae, Hilo	Mauka section.
Kauai:	
Waipa	Upper valley.
Lumahai	Upper valley.

DESCRIPTION OF INDUSTRIES AND ENTERPRISES.

THE SUGAR INDUSTRY.

By C. F. ECKART.

The year 1876, when the reciprocity treaty between the Kingdom of Hawaii and the United States of America was entered into, marked the advance of the sugar industry of the Hawaiian Islands; labor was plentiful and comparatively cheap, the prices of sugar were high and the conditions favored a rapid increase in the sugar industry of the islands.

In late years, however, the prices of labor have risen and the prices of sugar have decreased, and periods of industrial depression have at times very much affected the sugar industry. The planters have had their prosperous years, and have also suffered from lack of labor, droughts, low prices of sugar, and other conditions, during which times they have manufactured their sugar at such expense that there has been no profit. The unfavorable conditions, however, have been met with the progressive spirit of American farmers and business men, and improved methods of cultivation and manufacture have been adopted.

Twenty years ago the average yield of commercial sugar was about 10 pounds per 100 pounds of cane and the average yield of cane per acre was about 25 tons. At the present time the average yield of commercial sugar is about 12 pounds per 100 pounds of cane and the average yield of cane per acre is about 40 tons.

There are now being operated 52 sugar plantations, with outputs varying from 350 short tons of sugar per annum to 35,000 tons. The great majority of these plantations are operated under their separate management, while a few sell their cane to neighboring mills and plantations. These 52 plantations are all represented in Honolulu by agents.

Most of the plantations are joint stock companies. There are a few, however, which are owned by individuals. Forty-three of the plantations which are incorporated have 6,366 stockholders.

The sugar is shipped to San Francisco, Cal., and around Cape Horn by steamer and sailing vessel. From California it goes overland to the East.

Under the United States navigation laws it is necessary that all sugar sent from here be shipped in American bottoms. The planters have been unable to obtain suitable American tonnage sufficient to carry all their sugar to the East around Cape Horn, and at least one-fourth of the crop of 400,000 tons produced last year had to go to San Francisco, Cal., and from thence overland at a rate very much greater than by all water.

The time taken in getting sugar to the market is from two to five months, owing to the great distance which it has to be transported.

In some instances the sugar is shipped direct from the port of a plantation, but in most cases it comes to Honolulu or Hilo, Island of Hawaii, or Kahului, Maui, and from there is shipped to the States. The shipment from the various island ports to Honolulu is accomplished through the two interisland steam navigation companies, which control about 19 vessels representing an American tonnage of 6,018.

The Island of Hawaii produces more sugar than any of the other islands, the island of Oahu coming next, followed by Maui and Kauai. The annual output of the islands since 1894 has been as follows:

[2,000 pounds to the ton.]

	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.	1902.	1903.
	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>
Hawaii.....	72,199	61,643	109,299	126,736	91,606	117,239	115,224	134,618	121,295	170,665
Maui.....	33,689	27,735	29,097	41,047	45,033	54,389	57,347	58,349	56,726	84,776
Oahu.....	18,843	17,433	35,782	28,929	34,181	45,820	53,625	99,534	107,870	121,066
Kauai.....	41,701	42,816	51,650	54,414	58,594	65,359	63,348	67,537	69,720	61,484
Total..	166,432	149,627	225,828	251,126	229,414	282,807	289,544	360,038	355,611	437,991

At the present time the sugar industry is depressed and is feeling the effects of the low price of sugar which prevailed during the past three years and the lack of sufficient competent field labor. The damage done to the cane fields by the leaf hopper, cane borer, and fungus diseases has also been very great.

In the year 1902 the total tonnage produced in the islands was 355,611 short tons. The capitalization of the incorporated plantations was \$63,940,650, and the amount of dividends paid was \$1,757,520, or at the rate of 2.75 per cent.

In 1903 the total tonnage produced was 437,991 short tons. The capitalization of the plantations was \$64,878,931.63, and the total amount of dividends paid was \$1,555,652.68.

YIELDS, FERTILIZATION, AND CULTIVATION.

The yield of sugar for the Hawaiian Islands for the crop of 1903 was 438,054 short tons, which quantity was harvested from an area of 93,350 acres. The following statements of yields show the relative production on irrigated and unirrigated plantations and for the islands as a whole:

Yields of sugar for 1903.

	Acres.	Total sugar.	Yield per acre.
		<i>Tons.</i>	<i>Pounds.</i>
Hawaiian Islands	93,350	438,054	9,385
Irrigated plantations	42,097	260,525	12,377
Unirrigated plantations	51,253	177,529	6,927

While the average yield of 4.69 tons of sugar per acre appears high when compared with that of other sugar-growing countries, it is in a measure misleading, for the fact that the Hawaiian cane crop takes as a rule from eighteen to twenty-two months to mature (thirty months are required on certain fields on the uplands of Hawaii) necessitates a

considerable reduction in this stated yield before it can be brought into comparison with annual crops of other countries.

Reliable statistics have been recorded since 1895 showing the yields of sugar and acreage of all plantations in the group, and the increased production per acre between 1895 and 1903 may be seen from the following figures:

	1895.	1903.
Under cane.....acres..	47,399.5	93,350
Total yield of sugar.....tons..	157,419.5	438,054
Yield of sugar per acre.....pounds..	6,472	9,385

This increased yield per acre during a period of nine years may be attributed to several causes, which may be briefly stated as follows:

THE EXPANSION OF THE SUGAR INDUSTRY THROUGH THE TAKING OVER OF NEW LAND.

A certain gain per acre has without doubt followed the planting of new lands. The total area of cane harvested in 1895 was 47,399.5 acres. Of these sugar lands 23,945 acres, or practically 50.6 per cent, were dependent upon rainfall for their water supply, and 23,454.5 acres, or 49.4 per cent, were irrigated. In 1903 the area of cane harvested was 93,350 acres, of which 51,253 acres, or 54.8 per cent, were dependent upon rainfall, and 42,097 acres, or 45.2 per cent, received irrigation. These figures show that the unirrigated area has increased over the irrigated lands by 9,156 acres since 1895. Unless we stop to consider the nature of the lands added to the sugar area in each instance we would expect to find a decrease in the acre yield for 1903 rather than an increase, other influences being omitted from consideration.

New lands taken over by the unirrigated plantations have been largely on the higher levels, where the soil is thinner and poorer as a rule, and the sugar yields, although at first good, are soon reduced after harvesting one or two crops and become less than those obtained from the lower-lying areas. On the irrigated plantations the new lands which have been added to the cultivated area have usually been richer than those under cultivation for some time, and such expansion has followed the opening of new sources of water supply with the advantages of improved irrigation facilities. The production per acre on the unirrigated plantations was 30.4 per cent higher in 1903 than in 1895, and on the irrigated plantations a gain of 61.3 per cent was obtained during the same period. The gain in the former instance must be attributed almost entirely to improved methods of cultivation and fertilization and to the introduction of more thrifty varieties of cane, while in the latter case a greater production due to new lands can not be omitted as an important factor along with the gain from progressive methods of cane farming. A considerable part of this gain on the irrigated plantations was due to the yields of three plantations situated in a favorable locality bordering on Pearl Harbor. The acreage of cane harvested from these plantations in 1903 was 10,419 and the sugar yields 88,768 tons. Omitting these plantations from the list of irrigated estates would reduce the average yield per acre of irrigated plantations for 1903 from 12,377 pounds to 10,844 pounds,

and of the islands as a whole from 9,385 to 8,423 pounds. Two of these plantations, representing 49,993 tons of the 1903 crop, came into existence later than 1895, and the other has largely extended its area since that year. Increased technical skill in the mill and sugarhouse, with a resulting decrease in losses of manufacture, has also added to the output per acre.

While the foregoing comparison shows a remarkable increase between the years 1895 and 1903, it must be borne in mind that the high-water mark in the production of these islands has been reached; the crop for 1904 will not reach more than 380,000 tons, while that of the following year is not estimated to amount even to that figure.

The profits accruing from the increased yields on the irrigated plantations have not always been commensurate with the increased production, owing to the large cost of waterway construction and of pumping. The cost of irrigation includes the installation of pumps, construction of ditches and reservoirs, tunneling, and the labor of applying water to the cane furrows. The expense incurred in the making of Hawaiian irrigation ditches may be conceived when the obstacles encountered in this line of engineering work are considered. The headworks of the Makaweli ditch, for instance, involve 29 tunnels of a continuous length of 5 miles, 7 feet wide and 7 feet high excavated in the solid rock and built on a grade of 8 feet per mile, which will give a daily capacity of over 60,000,000 gallons when running 4 feet deep (report of M. M. O'Shaughnessy). As regards the cost of pumping to higher elevation, Mr. O'Shaughnessy states: "To pump 10,000,000 gallons daily against a head of 300 feet with ordinary pumps and fuel in service will consume 15 tons of coal daily, which at \$8 per ton amounts to \$120 for daily fuel expenses." Another engineer computes the average cost of lifting 1,000,000 gallons of water 1 foot, with coal as fuel, to be as follows:

Operating expenses.....	\$0.081
Interest 6 per cent.....	.014
Depreciation 3 per cent.....	.007
	<hr/>
	.102

With fuel oil the average cost is reduced as follows:

Operating expenses.....	\$0.053
Interest 6 per cent.....	.014
Depreciation 3 per cent.....	.007
	<hr/>
	.074

About 5,000,000 gallons are used per acre in the growing of a crop and this quantity is pumped to a maximum height of 550 feet.

A careful test conducted at the experiment station of the Hawaiian Sugar Planters' Association in Honolulu showed that without irrigation it was only possible to obtain 1,600 pounds, or less than 1 short ton of sugar per acre. This was with a rainfall of 32.5 inches per year. The largest of the irrigated plantations have a much smaller rainfall than 32.5 inches, and it would not be possible to harvest even the small acre output indicated by the unirrigated cane at the experiment station. A yield of 1,600 pounds of sugar to the acre would not justify the expense of growing, harvesting, and milling the same, and it is safe to say that were the sugar lands of this Territory entirely dependent upon rainfall, the 1903 crop would have yielded little more than 177,529 tons of sugar.

INTRODUCTION OF NEW VARIETIES.

In accordance with the experience of planters in other sugar-growing countries, those of Hawaii have been obliged to maintain the yields in many localities by the substitution of more thrifty and hardier canes than the old standard varieties. The attention given to this subject on many of the plantations has undoubtedly helped to raise the acre output. On Hawaii, the Lahaina cane after having been grown for many years was finally succeeded by the Rose bamboo, which latter variety is now making way for a more vigorous cane, termed Yellow Caledonia. In districts subject to overcopious rains or to excessive drought, and where Lahaina and Rose bamboo (in less measure) would show an occasional falling off in production, under such adverse influences Yellow Caledonia, through its hardier characteristics, has maintained a favorable yield in less-favored seasons. On lands which had given out for Lahaina to such an extent that the cane made but a meager growth, this variety has yielded a profit to some plantations that would otherwise have taken off their crop at a loss.

The Hawaiian Sugar Planters' Association maintains at considerable expense an experiment station in Honolulu, where new varieties introduced from foreign sources are carefully tested as to their productive value, and then sent to the various plantations for trial under their conditions. With the advent of serious insect pests and fungus diseases in Hawaiian cane fields, it became necessary to carefully watch the growth of these canes to note their relative immunity from disease and their ability to cope with the serious pests of the islands.

FERTILIZATION AND CULTIVATION.

Probably in no other cane-growing country does the subject of fertilization receive so much consideration as in the Hawaiian Islands, and the study which has been given to this question by plantation managers has done much to raise the sugar yield per acre throughout the Territory. Planters here have adopted a policy different from that usually in vogue. They do not wait to fertilize after the soil is depleted and exhausted, but practice the plan of sustaining the food qualities of the land and bettering its condition by the extensive use of fertilizers on the virgin soil. The percentage of the various ingredients, as well as the forms in which they are applied in mixed fertilizers, are carefully considered with regard to climate and soil and, owing to the diversity of Hawaiian conditions, fertilizer formulas show wide variations in the various districts of the group.

The average quantity of mixed fertilizer applied per acre for the crop of 1903 was 910 pounds, the average formula being 7.1 per cent phosphoric acid, 10.1 per cent potash, and 6.1 per cent nitrogen. The amount of mixed fertilizer applied to the crop of 1903 was approximately 41,000 tons. The amount of nitrogen, phosphoric acid, and potash used was as follows:

	Tons.
Nitrogen in mixed fertilizer	2,501
Phosphoric acid in mixed fertilizer	2,911
Potash in mixed fertilizer	4,141

About 6,000 tons of nitrate of soda containing approximately 900 tons of nitrogen were also used. These large quantities of the various fertilizing ingredients would have values somewhat as follows:

Nitrogen in mixed fertilizer.....	\$750,300
Phosphoric acid in mixed fertilizer.....	232,880
Potash in mixed fertilizer.....	393,395
	<hr/>
	1,376,575
Nitrogen in nitrate of soda.....	270,000
	<hr/>
Total.....	1,646,575

In addition to nitrate of soda, specially bought fertilizers, such as lime, ground coral, fish scrap, muriate of potash, tankage, and a mixture of nitrate of soda and sulphate of ammonia were applied. The value of these latter materials, together with the cost of bagging, mixing of complete fertilizers, and transportation would bring the total amount expended for fertilizers to somewhat over \$2,000,000. Besides these fertilizers, which were bought, large quantities of stable manure, furnace ash, molasses, and disintegrated mud press cakes were used, the exact quantity of which is not known.

On one plantation, as a result of careful fertilization, a gain of 100 per cent in sugar was obtained over unfertilized land. On very fertile soils, which respond less to fertilization, a gain of 20 per cent has been reached through the use of suitable fertilizing material.

Almost as much attention has been given to cultivation as to fertilization, and owing to the diversity of methods little can be said on the subject in a brief report of this nature. The most approved patterns of agricultural implements are used, and specially constructed plows, harrows, etc., have been adopted in some instances for the thorough preparation and cultivation of the soil. Steam plows are used on many estates, and deep plowing with moderate subsoiling are practiced where the depth of the staple will permit. In the rainy districts the cost of stripping; i. e., removing the dried leaves from the cane and keeping down weeds, are large items in the expense of cultivation.

During the last several years the cane fields of the Hawaiian Islands have been afflicted with a serious pest, termed the leap hopper (*Perkinsiella saccharicida*), which on many estates has greatly reduced the yield of the 1904 crop. Since getting a foothold in the Territory it has been noticed on seed cane arriving from Queensland and on Chinese cane imported for eating purposes by the Chinese population. It very probably was received originally from either Queensland or China, where it is not known as a pest, owing to the presence of natural enemies which keep it in check, or limitations exerted on its reproductive capacity through climatic causes. An inspection of all plants entering the islands is now rigidly enforced, and much labor and expense have been incurred in reducing to a minimum the chances of receiving insect and fungous pests from foreign sources. The Hawaiian Sugar Planters' Association has organized an efficient entomological bureau for the control of various cane pests, and it is expected that much will be accomplished in keeping down to a safer limit the hopper, borer, and such pests as have in the past proved highly injurious.

The prevailing low prices of sugar and high cost of labor, together with the serious loss annually incurred from insect and fungous depredations necessitate the utmost vigilance on the part of plantation mana-

gers to determine sources of loss in the mill and fields, and through technical skill in the one instance and progressive methods of farming in the other, to combat the tendency toward reduced profit which has been strongly felt from year to year.

THE COFFEE INDUSTRY.

By WM. W. BRUNER.

The coffee crop of 1903 was the largest in the history of the islands, and exceeded 3,000,000 pounds. The total value of all coffee exported to the United States and other countries for the year ending June 30, 1904, was \$184,180; for 1903 it was \$236,860, while for 1902 it was only \$126,644.

While coffee is grown in all the principal islands of the group, 95 per cent of it is produced on the Island of Hawaii, of which over 2,000,000 pounds or 80 per cent of the total Hawaiian production is produced in the district of Kona (whence the name Kona coffee), where it may be stated roughly that the industry furnishes employment to 1,000 people.

The entire area planted to coffee and now producing on the islands is under 4,500 acres. Much of the planting is classed as wild coffee; that is, the trees are not topped and are cultivated only in an irregular manner. These trees are cheaply cared for, growing somewhat under shade and in rocky ground, the growth of weeds is small, and while the crop of coffee on such trees is no more than 700 or 800 pounds per acre, it is cheaply picked, for it ripens almost uniformly. In better soil where the trees are topped, overbearing is the result, to the very great detriment of the trees, but by the application of fertilizer these trees are maintained in good condition, while the yield of coffee per acre is more than double that from the untopped, so-called wild trees.

The cost of production in Kona is about $7\frac{1}{2}$ cents per pound, and the coffee is bringing the producer about 10 cents at present. The cost of production in Hamakua is probably 10 cents and should net the producer 12 cents, as the Hamakua bean is larger and more sought after by the coffee roasters. The difference in the cost of production in the two districts, which produce the bulk of the crop, is due chiefly to the difference in the cost of picking, for in Hamakua coffee does not ripen as regularly and uniformly as it does in Kona.

The price of coffee has been very low for the past seven years, but the year 1903 was the most remarkable in its history, for during it prices reached their lowest basis and production its largest maximum. While the Brazil crop has very materially failed from the enormous 1901-2 crop of 15,000,000 bags, her production has been great and there has been an oversupply of Brazilian coffee. At the same time the production of mild coffees, in which class all coffee except Brazil production is included, has been on the increase, and in 1903 was over 5,000,000 bags. This affected the sale of the Hawaiian coffees, and will no doubt have a depressing effect on the sale of the next crop. So, that while Brazilian production has fallen off, and is likely to continue to, on account of the prohibitive tax against planting in Sao Paulo,

where Santos coffee comes from, planting is not likely to take place there for four years, in the meanwhile the production of mild grades has increased from 3,000,000 to 5,000,000 bags. But it can safely be stated that the world's consumption of Brazilian coffee has gone ahead of production for the first time since 1899-1900, although in a comparatively small way, so that overproduction in Brazil, which was the most depressing factor in the coffee-producing world, has ceased. Frost in 1902 and drought in 1903 put a good many plantations out of bearing, while the long period of low prices caused hard times, without any new planting, and thousands of the laboring class are leaving the country. It is said that over 20,000 left last year.

The United States is the largest purchaser of coffee, using about 11 pounds per capita, importing in 1903 \$61,329,564 worth, of an average value of 6½ cents per pound. Four-fifths of this coffee came from Brazil and was paid for mainly in cash, for the total imports from Brazil for the year amounted to \$69,000,000, while the exports from the United States were only \$10,000,000, leaving \$59,000,000 to be paid in cash.

To show what this means in a long period, during the years 1830-1903, inclusive, according to statistics by the United States Government, the imports of coffee into the United States total 22,125,000,000 pounds, valued at \$2,500,000,000, import price.

The Dingley Bill particularly prescribes the remedy by which the United States can secure a much larger share of Brazil's trade, in that it empowers the President, when in his judgment countries supplying the United States with coffee discriminate against United States products, with authority to place a duty on the coffee imported from that country. Brazil trades more with Germany than with the United States, because the Germans are there on the ground, and while American diplomacy has been active to bring about a change, not until a reprisal by tariff duty on her coffee was broached has Brazil been inclined to act. Minister Bryan has recently been reported to have succeeded in effecting satisfactory reciprocity arrangements.

Great quantities of the lowest grades of coffee are imported regularly into the United States, and it is a well-known fact that it is the dumping ground for coffee-producing countries. If you question any grower of prominence where he markets his coffee, he will answer that he ships his better grades to Europe and his poorer ones to the United States. Anyone who has visited a Spanish country will recall with pleasure the good coffee universally found, and this is fairly true in Hawaii, and there are people who have located here from the United States who say that they never liked coffee before they came here, and perhaps they never were able to get what could be classed as coffee where they formerly lived. As a matter of fact the great majority of the American people do not know what a good coffee tastes like. This is not their fault, but it is because coffee roasters purchase only the cheapest and lowest grades to be had and use such great quantities of adulterants and coloring compounds.

The coffee planter of Hawaii and his brother in Porto Rico have an uphill road at present, because they have not only to compete on uneven terms with Central American and other producers of mild coffees, who produce on a silver and sell on a gold basis, and who employ cheap Indian labor under the mozo system; but still the Hawaiian and

Porto Rican producers have two things in their favor: First and foremost is the quality of the coffee they produce, while the second thing in their favor they are not deriving much apparent benefit from yet, is the fact that they are integral parts of the United States; but they will in time secure the advantages which this connection must bring them. Did they produce a poor and inferior coffee it would be different.

The Commissary Department of the United States Army, 91 Whitehall street, New York, solicited bids on 91,000 pounds of coffee, receivable January 26, 1904, in which the specifications called for green coffee, Rio preferred, to be well cleaned and free from dirt and stones. Could Porto Rican or Hawaiian coffee compete under these specifications? Not much was desired in the way of coffee, it simply had to be free from dirt and stones. The Commissary Department of the Army as well as the Navy should use good coffee, and that should be at least in part either Porto Rican or Hawaiian.

As a matter of fact the Commissary Department of the Army in San Francisco, in its specifications for coffee to be supplied to it, contains a joker which absolutely precludes the use of Hawaiian coffee. The specifications call for samples of various coffees, including Hawaiian, which may all be blended except the sample of Hawaiian coffee which can not be blended. This absolutely prevents the use of Hawaiian coffee, for it is a high-grade coffee and certainly can not compete with similar grades of other coffees which have the privilege of being blended with cheaper coffees. This is rank discrimination against Hawaiian coffee by an important Government department; in fact, to be fair to the Hawaiian producer, as San Francisco is the principal market for his coffee, the specifications should call for samples which must contain not less than 50 per cent Hawaiian coffee. While there has been in Porto Rico, and to some extent here, a demand that the Federal Government should help the coffee producers in some way, either by bounty or protection, they at least might hope to secure the support of the Government by the use of only American coffee in the Army and Navy.

The Hawaiian and Porto Rican coffee growers are injured in the market which belongs to them by reason of the immense amounts of low-grade coffees imported. The competition with the superior grades they can and should stand. Eliminate the poorer grades of coffee and triage, and prohibit their importation by an act similar to the tea-inspection act of 1897, and the American consumer will get good coffee *nolens volens* and do the most possible good to the producer of good coffee everywhere.

The Federal tea-inspection act, of March 2, 1897, prohibits the importation of tea below a standard to be fixed by the Secretary of the Treasury, of "purity, quality, and fitness for consumption." On February 23 this year the Supreme Court affirmed the constitutionality of this act. Eight times had it been assailed in the courts. The importance of this decision can not be over estimated. It must be remembered that prior to 1897 the United States was the dumping ground for all the tea trash in the world. As a result consumption, which was 1½ pounds in 1865, fell off to less than 1 pound per capita, while since the passage of the tea-standard act the use of tea is on the increase, and last year was 1.30 per pound per capita, due in great part to the fact that the quality is guaranteed by Federal inspection.

In connection it is interesting to quote from the secretary of the Ceylon Association, London. Mr. Leake says:

In the United States customs authorities refuse to admit the commonest grades of China tea, but to maintain the supply of cheap teas in this country quantities of rubbish have been imported here after having been rejected by the United States customs as unfit for consumption.

The manner of adopting the tea standards is through a board of seven members, appointed annually by the Secretary of the Treasury, each of whom shall be an expert in teas, and receive as compensation the sum of \$50 per annum and traveling expenses, etc. It is an honor to serve on the board. They adopted thirteen standards for 1903 and readopted the same ones this year. In the footsteps of this act there should be passed another which shall prescribe the qualities and grades of coffee that shall be allowed entrance into the United States, and it should go further and include spices, cocoa, and chicory.

Pass a coffee-standard act on the lines of the tea act, and Hawaiian and Porto Rican coffees will advance from 3 to 5 cents per pound. It would strongly advance American coffee interests, while at the same time it would protect the consumer by absolutely preventing the importation of the lowest grades of coffee.

And now is the time to be discriminating, when there is an over-supply of coffee and prices are so very low.

Hawaii enjoys some advantages by reason of her shipping connections and her situation. She should supply more coffee than she does to Japan, Australia, New Zealand, and Canada; and particularly the last, as she remits her duty of 10 per cent on coffee imported from the country of production. Greater efforts should be made to build up the coffee trade with these countries.

If the price of coffee Hawaii produces were a few cents higher, with a prospect of stability in price, immense areas can and would be planted to coffee, as the industry, while now in some localities fairly profitable, can not flourish in less-favored sections at present prices. The industry in Hawaii, though small, is well established, and the product is on the increase, due to the conviction that better prices are only a matter of time. Great advances have been made in the preparation of the coffee for the market. Each year has shown improvement in the milling and grading, and shipments go forward much more uniformly in quality and appearance, so that it can confidently be predicted that Hawaiian coffee will secure for itself the high place its quality insures it.

Quality and not price will attract the American consumer, and when convinced that he is getting the quality, he will pay the price.

THE SISAL INDUSTRY.

By the HAWAIIAN FIBRE COMPANY.

About the year 1893 the commissioner of agriculture and forestry imported some 20,000 sisal plants from Florida. The favorable results of experimental work with them developed in the formation of the Hawaiian Fibre Company (Limited). This company leased land from the Oahu Railway and Land Company, situated on the coral plain between Pearl Lochs and the Waianae Mountains, in the Ewa district,

where plants were set out on a commercial basis. The barren, thin soil of this locality has been shown to be just what is needed for sisal, and comparative tests made by the Tubbs Cordage Company, of San Francisco, have proven the Hawaiian sisal to be superior to the best Yucatan.

When first started the Hawaiian Fibre Company represented an investment of about \$37,000, but later, owing to the success of the enterprise, the superior quality of the fiber, and high price it commanded, the company increased its capitalization to \$75,000.

At the present time there are about 750 acres of land in sisal, and it is expected that the area of the plantation will shortly be considerably increased, if not doubled. Sisal is of slow growth, requiring four years before the first crop matures.

The possibilities for Hawaii in sisal cultivation are shown by the number of plantations started on the various islands. The most promising localities for the growth of sisal have been found to be the comparatively barren, dry soils of the leeward coasts. From the nature of the sisal plant, requiring but little moisture and little cultivation, there are hundreds, probably thousands, of acres of land with thin, stony soil, not suited for sugar cane, which can be utilized for sisal cultivation. One of the largest plantations started on the other islands is the Knudsen plantation on Kauai. On Molokai and Maui considerable time and money have been spent in the introduction and cultivation of sisal. On Hawaii, plantations have been started in the districts of Kona and Olaa, where the industry has become of considerable importance.

From the success of the Hawaiian Fibre Company and the condition of the industry on the other islands, it is safe to predict that the future of sisal in the Territory is now assured. As the islands have such large areas, at present mostly uncultivated, where the soil and climate are well adapted to its growth, and as it requires so little expenditure in cultivation and cleaning, owing to the superiority of the fiber over all others, except perhaps the Manila fiber, and the greater and greater demand for binding twine and cordage, the industry will be, as it now is, a profitable one, and the time is anticipated when sisal fiber will be one of the staple products of the Territory.

THE PINEAPPLE INDUSTRY.

By JAMES D. DOLE.

The pineapples raised in Hawaii are disposed of through three channels: (1) Local sales of fresh fruit; (2) shipments of fresh fruit to the coast; (3) as canned fruit.

Taking them in order:

First. The sales of fruit in the local market are so small as to be of little importance. Honolulu and the sugar plantations furnish an outlet for a limited quantity of pineapples at good prices; but as 3,000 or 4,000 pines per week will at any time glut the local market, it may be considered of little commercial importance.

Second. Shipments of fresh pineapples to the Pacific coast on any large scale are badly hampered by the irregular, uncertain, and infre-

quent sailings of steamers. An interval of ten days or two weeks between sailings of freight boats during the height of the pineapple crop causes a heavy loss to any grower who depends on this outlet for his crop. Pineapples, however, are shipped during the season on every steamer and the business promises to grow. The system recently started by a local concern of delivering fresh pineapples prepaid to any address on the coast is proving successful and is already increasing the demand for the Hawaiian fruit.

Third. The canned pineapple industry has been developing as rapidly as the prevailing scarcity of plants would allow. Approximately 265 acres have been planted during the year—15 acres on Hawaii, 15 on Maui, and 235 on Oahu—making a total acreage planted of about 415 acres. The number of plants now set out in the Territory is approximately as follows: Maui, 300,000; Hawaii, 350,000; Oahu, 2,400,000. Two canneries have been erected during the past year, one by the Haiku Fruit and Packing Company, at Haiku, Maui, and one by W. W. Bruner, at Napoopoo, Hawaii. The canneries of the Pearl City Fruit Company and the Hawaiian Pineapple Company on Oahu have been enlarged. The output of canned pineapples in 1903 was approximately 8,000 cases, and it is expected that the 1904 pack will be close to 20,000 cases.

Pineapples in Hawaii are of unusually good quality because they are grown and ripen to full maturity in the sunshine before they are picked. The fruit is also canned on the spot, practically in the field, as the canning factories are located on the plantations. Hawaiian pineapples are now distributed throughout the mainland of the United States.

VANILLA.

By EDWARD H. EDWARDS.

Of itself the most valuable of what may be termed the aerial parasites, the vanilla vine promises to give to the tropical islands of the United States a new source of revenue and an added importance in the domestic economy of the country. For half a century at various points throughout the Hawaiian archipelago vanilla plants have been grown, more as a matter of experiment or for effect than in an attempt to produce a profitable crop. The plant has flourished wherever it was given attention, and to the efforts of Allen Herbert, at one time commissioner of agriculture under the Kingdom, is largely due the success which now seems about to crown the efforts to make productive this new industry.

Tropical in its nature, thriving best upon the soft, spongy growths, it was but natural that the vanilla plant should thrive wonderfully in our protected districts. Experience has proven that nowhere do the conditions necessary exist in greater perfection than in the Kona or southern side of the large island of the group, Hawaii. There is found a rich soil, decomposed lava, with an average of 80 to 100 inches of rainfall, and the growth of primitive forest to furnish the shelter for the vines. Although an aerial plant, the vanilla adapts itself to a variety of soils. For instance, where a fern tree has found foot-

hold among the rocks the vanilla will make its home, or in the free soil of the Aa or light lava, it will grow as luxuriantly. The vines require support, and it is best for their success that these be natural rather than artificial. These facts make possible a new development among the deserted coffee plantations, which ceased to be profit paying some time since. The tree fern and ti plant both offer excellent natural supports and furnish the needed sustenance for the vines.

The great difficulty so far has been in the procuring of the cuttings from which to start the plantation. Importations have been made from India and from the Caribbean Sea and Central America, but a majority of these plants have failed to adapt themselves to the climate. Some few have lived and from these cuttings were made within the first year, so that the original vine multiplies itself many times. In the experience of the pioneer in this line in the islands, E. H. Edwards, Vanilla Park estate, Napoopoo, more than 20,000 cuttings were imported to get 5,000 vines; or, to put it differently, bringing in a sufficient number of plants to start a 20-acre plantation he found himself with but 5 acres growing.

The vine grows rapidly and bears somewhat profusely once it has made its home in its new surroundings. In the island of Hawaii, which is absolutely tropical on its southern slopes, though tempered by trades to the north, vines have been known to bloom within ten months after planting, but it is not fair to expect a crop until the second year. Once planted, with the ground fairly clean around the trees used as natural supporters, the cost of maintaining the plantation is very small. Several times during the year the grass and weeds would have to be cut from about the vines, but other than that the trimming and gathering of the pods furnish light work for the daughters of a family. The pods picked at their maturity are cured by drying under cover, but this is light work and the process would be readily learned. In fact it is probable that once the industry gets a secure foothold central curing establishments will spring up in the midst of any producing district.

As to the future of the industry, it would appear that nothing more is needed than that production be prosecuted, for the demand seems almost unlimited. One New York importer has asked for from 10,000 to 20,000 pounds a year of high-class product, and on this the price must vary from \$4 to \$8.50 per pound. Each vine will produce about 25 full-sized pods per year. To be of the very first class these pods must run 7 inches in length, all the shorter ones classing as inferior grades. As it takes 100 of the cured pods to make a pound, the 1,000 vines usually planted to each acre would therefore mean 250 pounds of cured pods to each acre of the plantation. It can thus be seen that a vanillarie of 5 acres should give a family a comfortable income, once the vine is in full bearing. The use of frequent cuttings from the growing vines makes it possible to renew the bearing vine and keep the plantation in constant health, so that in the absence of some disease or pest, none of which are now known, the productiveness of an estate would be practically interminable.

THE LIVE-STOCK INDUSTRY.

By ALBERT F. JUDD.

It is not an easy matter to report briefly the present state of the live-stock industry in Hawaii. In the first place there is little information available, even in the office of the secretary of the Hawaiian Live Stock Breeders' Association. The association is young. An accurate report at the present time could be made only after personal inspection of the ranches on each island. The second difficulty is caused by the absence of any history of the industry, although cattle and sheep have been raised here, and horses also, since the days of Vancouver.

RANGES.

It is difficult also to concisely describe the ranches themselves, situated as they are on the eight islands, separated by rough channels from the principal market in Honolulu, and each of the ranches having its own peculiar topographical conditions. While the ranches on the low levels, namely, below 2,000 feet elevation, have many characteristics in common, there is a great difference among them, due to whether or not they are on the windward or leeward side of the island, the rainfall on the leeward side being much less than on the windward. Barren lava flows have their influence. The ranches above the 2,000 feet elevation line are in another class, all of them practically being on the islands of Maui and Hawaii.

GRASSES.

On the low-level ranches on the leeward sides the grasses in the pastures become dry in the hot summer months. The pastures at this time are assisted, however, by the beans of the algeroba tree. As this tree spreads, as it does readily, being carried in the dung of animals, the fodder problem during the summer is lessened. It is on the leeward sides of the islands that this tree has taken its greatest hold. Apparently it has begun to be acclimatized on the windward slopes, although it has as yet made little impression.

After the winter rains these pastures are all that could be desired. Their lack of permanence, however, makes their present condition undesirable.

The lack of distinct seasons and regularity in rainfall have to be taken into account by every ranchman. These facts complicate for him the problem of having his herds always well fed.

There are a number of indigenous grasses on the islands which are excellent feed and are of great value for fattening purposes. They are mostly grasses that can not stand continuous heavy stocking, and large areas of dry and rocky country, which in the past were considered the best fattening lands, are nearly denuded at this time. Much has been done by fencing off such places and giving the location an entire rest for a period of time, which invariably results in the Hawaiian grasses again taking hold.

The introduction of dry range grasses, however, will do much for this class of country. Experiments are now being conducted and the importation of seed is steadily going on in the different estates throughout the Territory. On the moister upper elevations a great variety of

the best grasses in foreign countries have been established here within the past few years. Among the grasses which are doing well are the perennial rye grass, Kentucky blue grass, redbtop, orchard grass, Natal redbtop, *Bromus inermis*, *Paspalum dilatatum*.

The introduction of new grasses has had much to do with the increased carrying capacity of the various ranges. While much of the land formerly used for cattle has been taken for sugar plantations, and much more destroyed, so far as immediate use is concerned by lantana, yet the carrying capacity of the islands to-day is far greater than it ever was before. Of course this is not alone accounted for by a greater diversity of good feed, but is largely due to the general improvement of the ranges in consequence of intelligent distribution of water, better stock, and also in the construction of paddocks, which allows the grazer to regularly rest portions of his ranch whenever so desired, and minimizes the danger from overstocking and running out some of the best grasses growing upon the land.

This question of fodder in the pastures is now mentioned because of its intimate relation to the present state of the live-stock industry.

HORSES.

From what has been stated, it will be seen that horses are raised under the best conditions on the uplands, where the mares are well fed all the year round. The hard conditions on the lowlands are mainly responsible for the degenerate kanaka plug and rice-field plow horse.

This thought leads me to say that the island of Hawaii produces a surplus of horses of the broncho type superior to those recently passing through Honolulu from San Francisco to Manila on the U. S. army transport *Dix*, and possessing the additional advantage of not needing to be acclimatized for use in the Philippines, and also of being 2,000 miles nearer Manila. As Hawaii has horses to sell, it surely is not out of place to call the above matter to your attention.

CATTLE.

The cattle industry has not reached the feeding stage. This is due to the absence of fodders, which can be grown cheaply. Experiments are now being made with the growing of corn in the Kula district on the island of Maui, and will shortly be undertaken on Molokai. It has been suggested also that the waste from the sugar mills, together with the cane tops now not utilized, might be available also for this purpose. All the cattle and sheep slaughtered on the islands are what would be called "grass fed."

Different ranges are adapted to different breeds of cattle: it can not be said that any one breed are the cattle for the islands. Without any accurate data, I should say that the Hereford is the most popular, or, at least, should be in most locations. There has been a large introduction of Herefords, Shorthorn, Angus, Devons, and Holsteins.

Up to within ten years ago very little was done in the introduction of superior stock. Importations were made before this time, but were small in number and at long intervals of time; so much so that it made no decided impression upon the herds. Within recent years, however, the grazers have seen the importance of introducing new blood and

grading up their stock. Large numbers of pure-blooded stock are being introduced annually, which has already made a decided improvement, and within a few years stock on most ranches should compare favorably with those of other countries.

Every herd of cattle has a residuum of old blood in it, cattle descended and inbred from the old Spanish cattle landed here by Vancouver. One of the problems for the ranchman is the turning of this undesirable part of his herd into cash. The conformation of the stock, with its slab sides and long legs, is such that even when in good condition much of the weight is bone. The blood is hardy but matures late. The stock is wild and often for this reason is badly bruised while going to market. The color of the stock is often yellow or black and tan, with occasionally a brindle hide. The market in Honolulu will not admit of the sale of a big lot of this stock at once, so each ranch has to try to work them off, often to the neighboring plantations or local market. This is being done by all intelligent ranchmen as fast as possible. It is upon this blood that most of the herds are built.

The 8,242 head of cattle slaughtered in Honolulu between July, 1903, and July, 1904, averaged 445 pounds per head. This includes cows as well as steers. Separate statistics are not available.

"Liver fluke" is still a scourge in certain localities. No cure is known for this disease among the ranchers. "Red water" is also prevalent in a few herds. The Territorial laws concerning quarantine against the diseases of animals appear to be insufficient. Until this matter is taken hold of by the Federal Bureau of Animal Industry and an inspector with full authority is stationed in this Territory there is a constant danger that diseases like "Texas fever" and "rinderpest" may slip in and decimate our herds.

The greatest pest on the ranches is the horn fly introduced some six or seven years ago with stock from the mainland. They bother cattle and horses day and night. On the latter they often cause sores on the backs even of brood mares which have never been handled. An unsuccessful attempt was made by our association in 1902 to import tumble bugs from Mexico to combat the pest, and it is hoped that Messrs. Koebele and Perkins, the entomologists who are now in the antipodes, may be able to send us some bug or insect to prey on the larvæ and thus bring relief to the herds.

At the present time the Territory supplies all the beef consumed locally. As methods improve there is a probability that there will be an overproduction and new markets must be sought. Possibly they may be found in supplying the United States Army transports en route to Manila. It is believed, however, that one or two severe droughts such as we have had in the past will probably stop overproduction.

Honolulu is the chief market for beef and mutton in the Territory. Hawaii has but three harbors in which the steamers of the interisland fleet can tie up to the wharf—Honolulu, on the island of Oahu; Hilo, on the island of Hawaii, and Kaunakakai, on the island of Molokai.

From July 1, 1903, to July 1, 1904, from the last-mentioned port there were shipped to Honolulu 809 head of cattle, none from Hilo, and 5,703 from the other ports on the islands (the Oahu-grown cattle are not figured in this account). Every one of these 5,703 head had to be roped, tied to a ship's boat, towed to a steamer, and hoisted aboard before making the trip across the channels to Honolulu. This

is one of the difficulties of the live-stock industry in Hawaii. Anyone can appreciate the fact that this method of sending to market can not compare with sending to market on the hoof or by train. It is doubtful, however, whether these conditions can be much improved.

DAIRYING.

Outside of the town and village centers dairying is carried on primarily for the advantage which is derived from taming and handling the young stock. Butter is made on most ranches, but, considering the number of cattle carried on the ranges, to a very small extent.

WATER.

Water is being intelligently developed on each ranch, and the multiplication of well-watered paddocks is the goal toward which every ranch is working.

It is realized that an improvement in the herd and greater weights on the butcher's account sales are dependent upon the carrying out of the above ideas.

CENSUS.

No census of the live-stock industry has yet been taken and it is difficult to make estimates of value. About the only accurate thing is the number of animals slaughtered in Honolulu. In addition to this each ranch slaughters locally or sells to the neighboring sugar plantations. Without trying to be more than approximate, I estimate Hawaii's herd as follows: Cattle, 140,000; sheep, 95,000.

SHEEP.

Our sheep are inferior in blood and conformation to our horses and cattle. Inbreeding, disease, and ignorance seem to have caused this present condition. In some herds the mortality among the lambs from lungworm, etc., reaches as high as 35 per cent. A strong effort is now being made to do away with these evils and to breed a dual-purpose sheep with sufficient stamina for all local conditions. Few of our pastures are free from burrs, mostly from introduced species of grasses and plants, and the wool suffers in consequence.

The herds do not yield enough mutton to satisfy local consumption in Honolulu, but in a few seasons they will be able to do so.

GOATS.

Goats run wild in many places and have caused and are now causing much damage to the forests and rocky pastures. They are not herded for profit, as far as I know, by any rancher or farmer.

MULES.

Mules are being raised in small numbers. Those bred from the average Hawaiian-bred mare are too small for harness, but make good saddle and pack animals. Most of the mules used upon the sugar plantations for hauling are imported from the mainland.

HINNIES.

On parts of Hawaii jackasses run wild. They are used as beasts of burden, though not much larger than a good-sized sheep. One rancher is experimenting in the breeding of hinnies, but the experiment has not yet advanced sufficiently to determine its success.

Progress is being made in the live-stock industry, and as better methods become more general and more intelligent ideas are put into operation more satisfactory will be the reports made upon it.

RAPID-TRANSIT SERVICE.

By C. G. BALLENTYNE.

Rapid transit in Honolulu as a great public convenience tells its own story daily. Handsome and comfortable electric cars, upon a network of routes, are well filled for eighteen hours a day. Outlying sections of the city, including some of its most picturesque environs, formerly remote and expensive of access from the business center, are becoming convenient for home sites and recreation purposes to all the busy inhabitants. Points of interest, capable of being visited within the shortest space of daylight that a calling ocean liner stays, have been multiplied with the extension of the electric-car tracks. The burden of society is eased by the cheapness and celerity, together with cleanliness, with which folks are now whirled to and from evening entertainments. Band music in the evenings and holidays may now be enjoyed by the multitude, however far from their homes the rendezvous, without long journeys on foot. Parents have a choice of schools for their children, so far as distance is concerned, at special rates of fare, which makes this expense scarcely appreciable in the sum total of the family's educational outlay.

The original rolling stock equipment of the Honolulu Rapid Transit and Land Company consisted of 35 motor cars and 10 trailers. This was found to be inadequate, both as to the number and seating capacity of the cars. The directors have therefore ordered additional equipment to consist of 10 motor cars of the open type, having a seating capacity of 56 persons each. They have also decided to splice some of the small motor cars and trailers, thus making one motor car of large capacity. In the month of May last oil was substituted for coal for steam generating purposes, with good results as to economy, efficiency, and cleanliness. Mr. C. G. Ballentyne, manager of the company, states that there has been 2,206 miles of new single track laid since June 30, 1903, chiefly in branches to the main lines. This is exclusive of 2,900 feet of turn-out construction. The construction of the Beretania street section, 2.447 miles, will complete the system, with the exception of a short extension of the King street line to the proposed military post at Kahauiki, about 3,500 feet.

The entire system now embraces the following:

	Miles.
The King street line, extending from Kalihi to Diamond Head, at Waikiki...	7.467
The Hotel street line, extending from Liliha and Wyllie streets, to Alexander and King streets.....	4.811
The Fort and Nuuanu streets line, extending from the Honolulu Iron Works, on Ala Moana, to the mausoleum, on Nuuanu street	2.206

	Miles.
The Beretania street line, operating from Fort and Allen streets, to and along Beretania street, to Alexander and King streets	2.562
The Alakea street line, extending from Allen street to Pauoa	1.240
The Manoa Valley line, extending from Wilder avenue up to Manoa Valley ..	1.745
The Waialae road line, operating from Alexander and King streets to Waialae ..	2.476
The South street branch .....	.277
The River street section, extending from Fort street along Queen street to River and King streets.....	.411
Total mileage operated.....	23.195

Number of cars in regular service, 25.

The following is a condensed statement showing the results of the car operations for the year ending June 30, 1904, with figures for the previous year for comparison:

	Year ending June 30—		Increase.
	1904.	1903.	
Passenger-car mileage.....	1,374,460.20	968,886	405,574.20
Passengers carried	6,528,391	4,799,933	1,728,458
Gross earnings.....	\$318,706.80	\$235,912.13	\$82,794.67
Operating expenses	\$178,643.63	\$128,590.85	\$50,052.78
Net earnings	\$140,063.17	\$107,321.28	\$32,741.89
Fixed charges, including interest on bonds, taxes, etc..	\$47,504.15	\$32,563.50	\$14,940.65
Net income.....	\$92,559.02	\$74,757.78	\$17,801.24
Per cent of operating expenses to earnings	56.05	54.50	1.55
Per cent of operating expenses and fixed charges to earnings.....	85.09	68.30	16.79
Capital stock outstanding.....	\$1,140,000.00	\$1,000,000.00	\$140,000.00
Bonded debt	\$610,000.00	\$425,000.00	\$185,000.00

NOTE.—From the operation of horse-car lines (July 1 to December 23, 1903), the earnings were \$13,288.51 and operating expenses \$19,637.32. These figures are not included in the above statement

During the year the company acquired the property and franchises of the Hawaiian Tramways Company's horse-car system, embracing about 12½ miles of track, 36-inch gauge, and dismantled the same in its entirety. Certain streets occupied by this company had already been occupied by the Honolulu Rapid Transit and Land Company, and of the remaining streets covered by the horse-car franchises the Rapid Transit Company has constructed its tracks on Beretania street, Nuuanu street, part of Fort street, Alakea street, and River street.

The following exhibit shows the results of the rapid-transit system, by months, during the last calendar year:

Month.	Mileage.	Passen- gers.	Earnings.	Operating expenses.	Net earnings.
January	78,661.63	407,312	\$19,510.20	\$10,836.66	\$8,674.14
February	84,300.75	387,230	18,596.05	11,171.27	7,424.78
March	93,026.39	438,606	20,989.55	12,537.24	8,452.31
April	90,208.39	417,211	20,106.70	11,485.83	8,620.87
May	93,435.51	457,718	21,940.90	11,767.09	10,173.81
June	93,807.95	476,390	23,076.65	11,798.94	11,277.71
July	103,383.87	498,911	24,641.25	13,325.94	11,315.31
August	106,890.95	513,633	25,324.30	14,047.04	11,277.26
September.....	102,979.68	510,979	24,568.20	12,586.99	11,981.21
October.....	108,104.14	540,296	25,784.20	13,118.63	12,665.57
November.....	109,016.86	534,627	25,855.75	14,458.33	11,397.42
December.....	119,263.60	606,244	29,474.30	15,385.56	14,098.74
Total	1,183,079.72	5,789,157	279,873.05	152,518.92	127,354.13
Income from other sources.....					4,445.96
Net income after deducting operating expenses					131,800.09
Fixed charges, bond interest, taxes, insurance, etc.....					41,607.14
Net income over all charges					90,192.95

Month.	Per cent expenses to income.	Miles in operation.
January.....	54.59	12.083
February.....	59.09	14.200
March.....	58.46	14.200
April.....	56.18	14.200
May.....	52.79	14.200
June.....	50.28	14.723
July.....	53.38	15.955
August.....	54.59	16.642
September.....	50.61	16.840
October.....	50.19	18.090
November.....	55.15	18.867
December.....	51.49	19.594
Average.....	53.64	15.799

SAFEGUARDS FOR THE PUBLIC.

The company's franchise, act 68, session laws of 1898, regulates the capitalization and the per cent of dividend which may be paid to stockholders, and safeguards the public against excessive charges. Section 37 limits the amount of the capital stock to "the actual cost of the property of the railway, and not over 25 per cent of such cost in addition thereto."

Section 17 provides: (1) For "the expense of operating, repairs, renewals, extensions, interest, and every other cost and charge properly or necessarily connected with the maintenance and operation of the said railway;" (2) "dividends may be paid to stockholders not to exceed 8 per cent on the par value of the stock issued;" (3) "a sinking fund (computed at 5 per cent) may be created for the redemption of any bond which may be issued or other record debt, and the capital at the expiration of the franchise;" and (4) "the excess of income (over and above the amount necessary for the foregoing purposes) shall be divided equally between the government of the Territory of Hawaii and the stockholders of the said corporation."

Section 9 regulates the "rates of fare," and provides that "any person riding upon the cars of said railway shall be liable to pay for such transportation the following rates: 'For a continuous ride between Diamond Head and Moanalua (upward of 8 miles) or makai (inland) of a line drawn parallel to the seacoast and 1½ miles distant therefrom, not to exceed 5 cents: *Provided*, That school children under 17 years of age, in going to and from school, shall not be required to pay over half fares, for which purpose tickets shall be issued.'"

Subsection 3 provides for the issue of transfers "from one car to another upon a connecting line."

Subsection 4 provides that the company "shall make reasonable and just regulations, with the consent and approval of the governor, regarding the maintenance and operation of said railway."

Policemen, firemen, and letter carriers, when on duty and in uniform, are carried free.

COMMERCE AND NAVIGATION.

THE COMMERCE OF HAWAII.

By E. R. STACKABLE.

The first tariff act of the Kingdom of Hawaii, entitled "An act for the regulation of taxes, duty, and government property," was approved May 11, 1842, and took effect January 1, 1843. Section 7 of this act read as follows:

It is furthermore enacted that from and after the first day of January in the year 1843 there shall be an ad valorem duty of 3 per cent laid on all goods, wares, and merchandise and on every article of trade imported to these Hawaiian Islands from foreign nations. None of the above articles shall be landed on these shores until the duty be paid or bonds for payment be given and the harbor master has given his consent, and he will not give his consent unless the owner of the property conforms to the above requirements.

It may be interesting to know that the first shipment of merchandise into Hawaii paying duty was brought by an American vessel, the *Vancouver*, from the Columbia River, consigned to a Mr. G. T. Allen, agent for the Hudson Bay Company, the entry for which was made on January 6, 1843, by Capt. A. Duncan, and consisted of 695 barrels of Columbia River salmon, valued at \$4,170, and 160 planks 4 inches by 12 feet, valued at \$307.20, on the total amount of which an ad valorem duty of 3 per cent, or \$134.32, was collected.

Fifty-three years prior to the establishment of a custom-house in the Kingdom of Hawaii the first tariff act of the United States was passed, entitled "An act for laying a duty on goods, wares, and merchandise imported into the United States," which was approved on July 4, 1789, and went into effect August 1 of the same year.

Mr. James Madison introduced the subject of the tariff and the bill above referred to in the House of Representatives on the 8th day of April, 1789. Part of his speech on that occasion is even of interest now, as the collection of revenue by this means has met with universal approval. Mr. Madison said:

I take the liberty, Mr. Chairman, at this early stage of the business, to introduce to the committee a subject which appears to me to be of greatest magnitude; a subject, sir, that requires our first attention and our united exertions. The deficiency in our Treasury has been too notorious to make it necessary for me to animadvert upon that subject. Let us content ourselves with endeavoring to remedy that evil. To do this a national revenue must be obtained; but the system must be such a one that, while it secures the object of revenue, it shall not be oppressive to our constituents. Happy it is for us that such a system is within our power, for I apprehend that both these objects may be obtained from an impost on articles imported into the United States.

The present tariff of the United States, approved July 24, 1897, (known as the Dingley bill) took full effect in this Territory on June 14, 1900, and the Federal custom-house was established on the premises formerly used for customs purposes under the Republic of Hawaii. (See sec. 88, act of April 30, 1900.)

The revenue collected through customs in the Territory of Hawaii is large in comparison with that of other communities, and is all the more striking because it is taken from within a limited area and a population of but about 155,000, while the revenue from customs in other ports is taken from a large population tributary to them.

The customs collections in Hawaii from June 14, 1900, to June 30, 1904, have been as follows:

1900 (June 14 to 30)	\$45,523.99
1901	1,219,338.79
1902	1,327,798.37
1903	1,193,677.83
1904	1,229,492.15
Total	5,015,831.13

In 1903 the following customs districts in the United States collected over \$1,000,000:

1. New York	\$182,774,815.67
2. Boston	24,030,350.53
3. Philadelphia	22,973,897.43
4. Chicago	9,751,644.72
5. New Orleans	8,670,585.07
6. San Francisco	7,850,705.35
7. Baltimore	5,417,360.70
8. St. Louis	2,035,054.62
9. Tampa	1,301,986.36
10. Detroit	1,272,555.58
11. Hawaii	1,193,677.83
12. Newport News	1,120,468.76
13. Cincinnati	1,106,010.09
14. Cuyahoga (Cleveland)	1,088,609.32
15. Vermont	1,051,245.99
16. Puget Sound	1,027,774.04

From the above it will be seen that Hawaii was eleventh on the list, collecting more than such large places as Newport News, Cincinnati, Cleveland, and the entire Puget Sound region.

Since 1897, the year before the passage of the joint resolution of annexation, approved July 7, 1898, the exports from this Territory to the United States have practically doubled, increasing from \$13,687,799 to \$25,157,255 in 1904.

Turning to the import side, the figures show an even larger growth. The imports from the United States grew from \$4,690,075 in 1897 to \$11,987,050 in 1904. These latter figures, however, are not for the banner year. Following annexation, the commerce of Hawaii was stimulated by the influx of new capital, and in 1901 there was imported from the United States over \$22,000,000 worth of goods, while the banner year for exports was 1903, in which the value exceeded \$26,000,000. This falling off is undoubtedly due to the depression that has existed here of late.

Total value of all articles imported from foreign countries and exported from the District of Hawaii for the fiscal year ending June 30, 1904.

Countries.	Imports.	Exports.
United States	\$11,987,050	\$25,157,255
Great Britain	622,465	492
British colonies	904,772	23,120
Germany	347,359	558
Hongkong	189,101	14,027
Japan	1,205,055	5,090
Chile	506,955	.....
France	8,778	18
Other countries	13,156	4,315
Total	15,784,691	25,204,875

Shipments received from the United States	\$11,987,050
Imports from foreign countries	3,797,641

Total 15,784,691

A remarkable exhibit is made by comparing the trade growth per capita of population in Hawaii, which shows an increase from \$131 up to \$247, under annexation, for every man, woman, and child in the country—a total per capita of trade that is more than eight times greater than that of the trade per capita for the entire United States. Thus:

Hawaii's per capita of trade.

Fiscal year.	Imports.	Exports.	Total.
1897	\$33.50	\$97.77	\$131.27
1898	42.20	122.76	164.96
1899	66.46	127.36	193.82
1900	90.00	138.05	228.05
1901 .....	.....	186.02	.....
1902 .....	.....	164.86	.....
1903	72.27	174.95	247.22
1904	105.23	161.37	273.26
1903, per capita foreign trade of the United States .....	.....	.....	30.43

The principal sources from which foreign goods were received in 1903 were: Japan, \$910,686, mostly saki, rice, and other provisions; British East Indies, \$437,967, mostly jute bags; Germany, \$432,498, miscellaneous merchandise; Australia, \$382,494, almost entirely coal; Chile, \$271,173, nitrates; United Kingdom, \$259,311, miscellaneous merchandise; Hongkong, \$197,083, Chinese provisions and other goods.

Thus there remained only \$100,000 worth of goods supplied by all other foreign countries.

Hawaii's staple product for export is, of course, sugar, and its output has more than doubled in quantity and in value within the past eight years. As this is the principal commodity that affects the prosperity of the Territory, its importance will be realized from the following exhibit:

Quantity and value of sugar exported.

Year ending June 30—	Pounds.	Value.	Price per pound.
			<i>Cents.</i>
1896.....	352,175,269	\$11,336,796	3.22
1897.....	431,196,980	13,164,379	3.05
1898.....	499,766,798	16,660,109	3.33
1899.....	462,299,880	17,287,683	3.72
1900.....	504,713,105	20,392,150	4.05
1901.....	690,877,934	27,093,863	3.92
1902.....	720,553,357	24,147,884	3.35
1903.....	774,825,420	25,665,733	3.31
1904.....	736,491,992	24,359,385	3.30

All of this sugar is sold in New York or San Francisco, and it affords cargoes for American steamers and sailing vessels amounting to almost 400,000 short tons, besides the smaller shipments of coffee, sisal, fruits, hides, etc., which are shown in the following table, as taken from official records of the custom-house:

Total value of domestic products shipped to the United States and exported to foreign countries during the fiscal year ending June 30, 1904.

Articles.	Quantity.	Value.
	<i>Pounds.</i>	
Sugar, raw.....	736,491,992	\$24,359,385
Coffee, raw.....	1,481,968	184,180
Rice.....	40,261	1,629
Fruits.....		128,624
Honey.....		17,947
Hides.....	970,381	74,331
Wool, raw.....	169,938	22,406
Other.....		384,047
Total.....		25,172,549

Domestic products shipped to the United States for the year ending June 30, 1904.

Articles.	Quantity.	Value.
	<i>Pounds.</i>	
Sugar, raw.....	736,491,992	\$24,359,385
Coffee, raw.....	1,372,249	169,172
Rice.....	39,911	1,610
Fruit.....		127,725
Honey.....		14,346
Hides.....	970,381	74,331
Wool, raw.....	169,938	364,558
Other.....		22,406
Total.....		25,133,533

Domestic exports to foreign countries for the year ending June 30, 1904.

Articles.	Quantity.	Value.
	<i>Pounds.</i>	
Coffee, raw.....	109,719	\$15,008
Rice.....	350	19
Fruits.....		899
Honey.....		3,601
Other.....		19,489
Total.....		39,016

It will be seen from the foregoing that Hawaii's exports to foreign countries are practically nil, and that almost the entire exportable commodities from these islands go to the mainland.

Exports for the year ending June 30, 1904.

Domestic merchandise to foreign countries	\$39, 016
Domestic merchandise to United States	25, 157, 255
Foreign merchandise to foreign countries	8, 604
Foreign merchandise to United States	23, 722
Total	25, 228, 597
Total specie exported to United States and foreign countries	285, 493

Last year there were 488 vessels of 933,847 tons that entered Hawaiian ports, and 497 vessels of 936,627 tons that cleared for mainland and foreign ports. Of these there were 377 American vessels of 667,350 tons entered and 387 American vessels of 672,539 tons that cleared. This indicates that more than 70 per cent of the total commerce of Hawaii with the mainland and all foreign ports is conducted under the American flag, as follows:

Nationality.	Entered.		Cleared.	
	Vessels.	Tonnage.	Vessels.	Tonnage.
American	377	667, 350	387	672, 539
Foreign	111	266, 497	110	264, 088
Total	488	933, 847	497	936, 627

But there are many foreign steamers calling here that carry no freight to or from the mainland, hence the proportion of trade carried by American vessels is even larger than the foregoing figures would indicate, and can better be shown by giving the values of the merchandise received and exported by vessels of different nationalities. This gives a total of \$26,597,353 to American vessels out of a total of \$29,002,516, or 90 per cent of the whole.

Value of the carrying trade to and from the Territory of Hawaii for the year ending June 30, 1904.

Nationality.	Imports.	Exports.
American	\$1, 414, 940	\$25, 182, 413
British	1, 474, 521	15, 817
French	25, 757	.....
German	284, 606	.....
Italian	15, 402	.....
Norwegian	15, 173	.....
Other	567, 242	6, 645
Total	3, 797, 641	25, 204, 875

Total number of vessels entering and clearing in the district of Hawaii during the fiscal year ending June 30, 1904.

Ports.	Coastwise. ^a				Foreign.			
	Entered.		Cleared.		Entered.		Cleared.	
	Number.	Tons.	Number.	Tons.	Number.	Tons.	Number.	Tons.
Honolulu	235	469,959	290	524,966	176	391,351	105	316,530
Hilo	33	41,530	40	50,842	3	3,547	.....	.....
Kahului	9	8,099	23	19,369	12	12,157	.....	.....
Koloa	2	1,012	20	18,076	.....	.....	1	994
Mahukona	17	5,550	18	5,850	1	642	.....	.....
Total	296	526,150	391	619,103	192	407,697	106	317,524

^aThe figures under the title "coastwise" refer to American vessels doing business between Hawaiian and mainland ports, but do not include vessels engaged in the traffic among the Hawaiian Islands.

Total number of vessels entering and clearing in the district of Hawaii.

	Entered.		Cleared.	
	Number.	Tonnage.	Number.	Tonnage.
Coastwise ^a	296	526,150	391	619,103
Foreign	192	407,697	106	317,524
Total	488	933,847	497	936,627

^aThe figures under the title of "coastwise" refer to American vessels doing business between Hawaiian and mainland ports, but do not include vessels engaged in traffic among the Hawaiian Islands.

Statement of vessels entering and clearing in the district of Hawaii for the fiscal year ending June 30, 1904.

Nationality.	Entered.		Cleared.	
	Vessels.	Tonnage.	Vessels.	Tonnage.
American	377	667,350	387	672,539
British	74	174,622	75	177,563
Japanese	19	65,487	18	62,027
German	6	8,680	5	6,885
French	2	4,186	2	4,186
Italian	3	4,150	3	4,150
Norwegian	3	3,680	3	3,680
Chilean	4	5,692	3	3,886
Swedish .....	.....	.....	1	1,711
Total	488	933,847	497	936,627

STEAMSHIP COMMUNICATION.

By J. G. ROTHWELL.

There are a number of first-class steamers running between Honolulu and San Francisco, but only one of them makes its terminus at this port, the others merely touching here while en route to the Orient or Australia. The Pacific Mail Line now has the *Korea*, *Siberia*, *Mongolia*, and *Doric*, with the *Manchuria* coming. The Toyo Kisen Kaisha Line withdrew its steamers owing to the war between Japan and Russia, but one of its boats has now been replaced on the line. This is a service to Hawaii only to the extent that the Japanese steamers carry mails.

The Oceanic Steamship Company has the *Alameda*, *Sierra*, *Sonoma*, and *Ventura* calling here, the last three named going on to Samoa and Australia. Practically, then, there is only one steamer, the *Alameda*, that is employed in regular service between Honolulu and San Francisco.

Transportation charges are at present, by steamer, \$75 first class either way, or \$135 for the round trip; second class, \$50; sailing-vessel rate, \$40. The rate is the same to San Francisco whether the passenger travel direct by American steamer or by British steamer to Vancouver and thence to destination by rail. The same is true if the passenger for Vancouver, British Columbia, go direct by British steamer, or through San Francisco and by rail to the North. For twelve months efforts have been directed toward securing reductions of fares, but without avail.

In addition to the passenger lines mentioned, the Hawaiian-American Line sends freight steamers around the Horn between Honolulu and New York, and has one vessel in the trade between this city and San Francisco. The various lines of sailing packets between this port and San Francisco and New York employ some 20 vessels, and a large number of deep-water ships are called for each year in addition.

The operation of the coasting laws, under existing conditions, has diverted travelers from these islands, and is building up travel in and across the Pacific by other routes. The chamber of commerce in this connection adopted the following resolution on December 3, 1903, as its sense:

Whereas, the operation of the United States navigation laws prevents the carrying of passengers between the Pacific coast ports of the United States mainland and Honolulu in other than American vessels, thereby seriously inconveniencing the business public and discouraging intending tourists from visiting this Territory;

Whereas, the coasting laws of the United States are applied in a manner not contemplated by their framers; in fact, noncontiguous territory until now has never been included in the United States;

Whereas, travel to and from this port is hampered by the fact that only seven American steamships are now in the passenger trade between Honolulu and the mainland, while an equal number of foreign steamers, carrying the United States mail, ply between this port and San Francisco;

Whereas, the restrictions of travel between this port and the mainland to American vessels does not secure to them the transportation of all passengers destined from these islands to the American continent, but diverts to British Columbia a large number of wealthy tourists and business men who would otherwise travel through the United States;

Whereas, for the same reasons, outward-bound passengers and tourists from the Pacific coast are diverted from Honolulu to Japan and China:

Be it resolved, That the Territorial Delegate be requested to lay the above facts before Congress, with a view to the modification of the existing navigation laws to the extent that passenger travel between this port and the Pacific coast ports of the United States be not restricted to American vessels.

Present conditions, so far as passenger travel is concerned, show clearly and positively that no consideration is given by the several ocean transportation companies, either from the standpoint of probable expansion of their business here or from any appreciation of the needs or requirements of the people of this Territory; on the contrary, there is every indication of a mutual understanding between these companies to maintain the highest rates the traffic will bear. Unfortunately for this community, the United States shipping laws serve only to support and foster this, and in the absence of competition our people are, so far, helpless. With the exception of one local boat, all steamers call-

ing at this port are through boats, having their terminus either at oriental points or in the Australian colonies, and as a consequence the trade they may or may not pick up at Honolulu is a matter of more or less indifference to them, or apparently so, as they appear to be united in maintaining fares between Honolulu and San Francisco for a round trip ranging between 12 per cent and 50 per cent higher than between other ports in the Pacific. The following statement, compiled from the published schedule of the Oceanic Steamship Company, will substantiate this:

A round-trip ticket between San Francisco and Honolulu costs \$135. Distance traveled, 4,200 miles; rate per mile, 3.21 cents. Taking this rate as a basis, the following result is shown:

	Rate.	Distance.	Per mile.	Per cent.	Days on trip.	Rate per day.
		<i>Miles.</i>	<i>Cents.</i>			
San Francisco and Honolulu and return.	\$135.00	4,200	3.21	0	12	\$11.25
Tahiti.....	150.00	7,316	2.18	47	22	7.00
Samoa.....	225.00	8,740	2.57	25	26	8.70
Fiji.....	285.00	9,970	2.85	12	30	9.505
Auckland.....	300.00	11,860	2.53	27	36	8.33
Sydney.....	300.00	14,200	2.10	53	42	7.15

While no doubt the explanation will be made that there is a subsidy paid for mails carried between some of the above ports, it does not appear reasonable that it should cost our traveling public 53 per cent more to go to San Francisco and return than it does passengers from Sydney in proportion to the service rendered. If the same relative rates were charged to Honolulu as are now asked to Tahiti, which would mean about \$90 for the round trip, the increased travel to Hawaii would soon prove more profitable.

Inquiry into the subsidies paid by the United States Government for the carriage of mails by American steamers on trans-Pacific runs shows that the total amount of mail subsidies paid by the United States Government for this service in 1903 was \$431,251.26. These payments are made to the different transportation companies concerned when running to foreign ports, such as oriental points or to the Australian colonies, on the basis of \$4 per mile traveled on the outward trip for steamers of the first class and \$2 per mile traveled on the outward trip for steamers of the second class. The second class is limited to steamers of not less than 5,000 tons gross measurement. The oceanic steamers running to the colonies are rated as being 6,200 tons, and would, therefore, come under the second class. The distance to Sydney from San Francisco is 7,210 miles. At \$2 per trip per mile this would be a subsidy amounting to \$14,420 per trip, and seventeen trips made by these steamers per annum gives a total subsidy paid to them by the United States Government for mail service; and also, in consideration of their being subject to requisition by the Government in time of war and being, therefore, constructed under certain prescribed rules, would amount to \$245,140 for the services performed by the steamers *Sierra*, *Sonoma*, and *Ventura*. In addition to this the steamship *Alameda* is paid \$15,000 per annum as a special contract, and there is a further subsidy of \$7,000 per annum for the run from Samoa to San Francisco as a direct subsidy. This makes a total amount paid to the Oceanic Steamship Company of \$267,140 under United States laws and including

additional contracts for domestic service. These statements are compiled from postal reports and are believed to be correct.

Between Hilo and San Francisco a steamship line has been established, with one steamer running direct between the two ports and making the round trip in about four weeks. This has proved a great convenience to both passengers and shippers on the island of Hawaii, and the service is stimulating a large export demand in bananas, which settlers there are now producing in considerable quantities since the opportunity has been offered them of shipping direct to market.

APPENDIX.

COMMUNICATIONS FROM PUBLIC ORGANIZATIONS IN HAWAII RECOMMENDING APPROPRIATIONS.

A.

Letter from the Honolulu Chamber of Commerce.

HONOLULU, HAWAII, *August 12, 1904.*

SIR: The Chamber of Commerce of Honolulu, through its committee on legislation and public improvements, solicits your assistance in the following matter:

We deem it a matter of national importance that the port of Honolulu be, and continue to be, a "clean" port. It is not too soon to prepare for the opening of the Panama Canal. The tropical diseases rampant at the Isthmus are unknown here as yet. Our experience with oriental epidemics convinces us that our equable climatic conditions afford a ready culture for any new disease which commerce may bring to our shores.

That, against the opening of the canal, Honolulu be made disease proof is a national matter. It will cost less in money and human life to have such work as may be necessary done before the port becomes inoculated.

Our petition is that the President by Executive order provide for a Honolulu sanitary commission to look over the problem on the ground and report a project thereon. We believe this may be done without expense, or rather without a special appropriation by Congress, by having the Surgeon-General of the Public Health and Marine-Hospital Service and the War Department each detach an officer to serve on this commission, one a trained physician and the other a sanitary engineer.

With this report made by authority, the necessity of Federal assistance in carrying out its recommendations may be urged on Congress later with some hope of success.

If you can indorse this prayer of ours in your letter of transmittal, we ask you to do so.

Respectfully, yours,

THE CHAMBER OF COMMERCE OF HONOLULU,
By JAMES A. KENNEDY,
F. J. LOWREY,
Committee on Legislation and Public Improvement.

Hon. G. R. CARTER,
Governor of Hawaii, Honolulu.

B.

Letter from the Honolulu Chamber of Commerce.

HONOLULU, HAWAII, August 12, 1904.

SIR: Allow us to append to our letter of even date the following statement of matters which we desire to bring to your attention, but which we think can be accomplished without asking direct appropriations from Congress:

1. The first of these concerns the surveys for the necessary dredging work in Honolulu and Pearl Harbor. We believe that strong representations from you to the Secretary of War will result in having suitable reports immediately prepared.

2. Until such time as the Island of Oahu shall be adequately provided with fortifications we urge upon you the necessity for having stationed here continuously some coast-defense vessel of the Navy. It is our hope that a request from the governor to the Secretary of the Navy may result in the stationing of some such vessel in our waters.

3. For our fellow-citizens now segregated as lepers in the settlement of Molokai we ask that a surgeon of the United States Marine-Hospital Corps may be stationed at Kalaupapa for the purpose of scientifically studying the disease of leprosy in the hope of ultimately finding a cure.

4. It is not too soon to prepare Honolulu for the opening of the Panama Canal. The tropical diseases rampant at the Isthmus are unknown in Hawaii, and our experience with oriental diseases is that they find a ready culture under our equable climatic conditions. We believe that extensive public works may have to be constructed before Honolulu can be considered disease proof; that to have Honolulu a clean port concerns the entire Pacific coast of the United States, and that being a national matter, the Territory should have assistance by the Federal Government. In order that this problem may be approached satisfactorily we ask you to represent the situation to the President with the request that he direct the Surgeon-General of the Marine-Hospital Service to detach a surgeon, and the Secretary of War to direct that an engineer of the United States Army be ordered to act with this surgeon, the two of them to compose a commission to study the problem on the ground and to report not only the necessity for the work, but plans and specifications for it. We transmit herewith a letter for this purpose.

5. We understand that there are two irrigation surveys now authorized by law, one being under the Department of Agriculture and the other under the Geological Survey, and that this work may be extended over Hawaii. Much of the wealth of these islands is due to irrigation, and the possibilities of further agricultural development depend, in large measure, on the extension of irrigation. We ask you, therefore, to use your influence with the authorities in Washington to see if one or both of these surveys can not be extended to Hawaii.

6. We ask you also to use your best efforts to secure the making of a soil survey of these islands by the Department of Agriculture. It is our understanding that this work can be done under existing laws if the Secretary of Agriculture sees fit to authorize it.

While we are on this subject of federal expenditures in the Territory we desire to call again to the attention of the Federal Government the desirability of perfecting the plans already made for an army post on

the highlands of Waianae-uka, on the Island of Oahu, which land has already been set apart as a military reservation. It is submitted that if a halfway station between San Francisco and Manila be maintained there for the acclimatization of our troops to the Tropics they would be ready for more efficient service upon reaching the Philippines.

This tract of land lies directly back of Pearl Harbor, and has an elevation of about 800 feet. An abundance of pure water, good drainage, trade winds, cool nights, ample room for rifle and cannon practice and for maneuvers leave little more to be desired for the above purpose.

In these various matters we stand ready to lend you all the assistance in our power.

All of which is respectfully submitted.

THE CHAMBER OF COMMERCE OF HONOLULU,
By JAMES A. KENNEDY,
F. J. LOWREY,
Committee on Legislation and Public Improvement.

Hon. G. R. CARTER,
Governor of Hawaii, Honolulu.

C.

Letter from the Merchants' Association of Honolulu.

HONOLULU, HAWAII, August 19, 1904.

SIR: The Merchants' Association of Honolulu, in reply to the letters received from Acting Governor A. L. C. Atkinson under dates of July 5 and 28, beg to state:

The wholesale and retail business in its various branches has faced a serious depression in trade during the past two years.

There are several causes to which we can look upon as having brought about the present discouraging state of the mercantile community, among which we would call special attention to—

(1) The loss of customs revenue amounting to about \$5,000,000 during the past four years since annexation;

(2) The forced Territorial expenditure for dredging Honolulu Harbor and upon light-houses and their maintenance;

(3) The inconsistent showing made by a comparison of receipts and returns by the Federal Government as put forth in the following data:

The United States Government collects annually per capita from Hawaii \$8.52.

The United States Government returns directly per capita annually to Hawaii \$1.62.

The United States Government expends annually per capita for its mainland population \$7.97.

(4) Decrease in population, especially among our most valuable workers, the Portuguese, a large number of the latter having been compelled to seek work in other countries on account of the Territorial government being unable to continue necessary work on public buildings, roads, and bridges, owing to shortage of funds.

To bring business back to its former flourishing condition, and in view of the large amount of profit gained by the Federal Treasury directly from Hawaii, we would urge strong representations be made

to Congress with a view of having a fair proportion of the Federal receipts from Hawaii expended for necessary improvements in this Territory.

We submit our most urgent necessities and reasonable requests to be—

(1) Continued dredging and enlargement of Honolulu Harbor to the end of our being able to dock with safety the largest merchant or naval vessels;

(2) A large Federal building which will accommodate the departments of customs, post-office, justice, and administration, and thus do away with the great inconvenience both to the Federal officers and the public by reason of the present scattered locations of the different departments;

(3) Naval station at Pearl Harbor, the opening of which would bring these waters into practical use and make possible the direct shipment of about 100,000 tons of produce per annum.

(4) *Fortifications and army post.*—It is our understanding that these two items are already assured, but we would suggest that efforts be made which will result in the early commencement of this work.

(5) Breakwater at Hilo, *the only possible harbor on the island of Hawaii.*

The work necessitated by the above-suggested improvements would bring to our midst a most desirable class of mechanics, artisans, and laborers, on whom the mercantile interests depend for the life of trade.

(6) *Transport and naval supplies.*—We particularly request that your influence be exerted on the Navy and War Departments in order that Honolulu merchants be given an opportunity to furnish supplies for the transports and war vessels instead of the departments shipping goods to Honolulu to meet vessels expected to arrive here, notwithstanding the fact that our local keen competition would in most cases result in a saving to the Department.

(7) We would respectfully suggest that the Territorial government make up an account against the Federal Government for each and every item expended for light-houses and buoys from June 14, 1900, to the date upon which this service was taken over by the Federal Government, attach vouchers thereto, and have their correctness certified to by the proper local Federal officer, and the same be forwarded to the Department at Washington. This amount will be found to be \$43,421.76. We would further recommend that the same action be taken with the Territorial expenditure on dredging Honolulu Harbor only from June 14, 1900, to the date of last expenditure, which items will be found to approximate \$132,000, or the aggregate of both dredging the harbor and light-houses and buoys approximately \$175,420.

We consider the granting of the above-enumerated requests as absolutely necessary to restore and put into circulation at least a part of the large revenue received by the Federal Government from this Territory. Such a condition as now exists can not last long without more serious depression than we are now suffering.

Thanking you for the opportunity of making these representations, we beg to remain,

Very respectfully,

GEO. W. SMITH,
President Merchants' Association.

Hon. GEO. R. CARTER,
Governor Territory of Hawaii.

D.

Letter from the Hilo Board of Trade.

HILO, HAWAII, August 4, 1904.

SIR: In compliance with your request under date July 28, 1904, we beg to make the following suggestions:

(1) That Congress acquire that land belonging to the Territory of Hawaii, situate in Hilo and bounded on the north by the Wailuku River, south by Waianuenue street, east by Bridge street, and on the west by Pitman street, and erect thereon a suitable building including vaults for the use and occupation of the United States post-office, United States land office, United States courts, United States custom-house, surveyor of the port, United States internal-revenue office, and other Federal offices. That Congress appropriate the sum of \$150,000 for defraying cost of said building.

(2) That Congress appropriate the sum of \$100,000 to enable the Secretary of War to make a survey and estimate for the construction of a breakwater from the ocean along Blond Reef to Coconut Island.

(3) That an amount of \$10,000 be appropriated for the establishing of a United States marine-hospital service in connection with the Hilo hospital.

(4) That an amount of \$10,000 be appropriated for the erection of a light-house at Lelewi Point.

There are many and various reasons why we should have the above mentioned appropriations, a few of which we mention briefly as follows:

The Island of Hawaii is the largest and richest of the whole group. It has a greater area than all the other islands put together. It has an area of 4,200 square miles as against the combined area of all the other islands of 2,530 square miles. It has a population of 46,843 or 34 per cent. of the whole group. During the year 1903 it produced 170,665 tons sugar as against 437,991 tons for the whole group; approximately 39 per cent of the whole.

The value of real and personal property as taken from the tax assessor's books is \$27,559,038, an increase of \$1,793,369 over that of the year 1902.

Money-order business at the Hilo post-office in 1901:

Orders issued	8,570
Amounting to	\$288,116.13
Orders paid out	2,420
Amounting to	\$45,114.65
For the first eleven months of 1902:	
Orders issued	9,862
Amounting to	\$292,511.25
Orders paid out	2,648
Amounting to	\$48,523.40

Showing an increase for the past eleven months over the previous year of 1,520 orders handled, amounting to \$7,804.07.

We have been unable to obtain any figures from the postmaster on this subject at the present time.

The present wooden barn used for a post-office is not only inadequate but is unsafe; so much so that when any large amount of cash is on hand the postmaster feels it necessary to keep a man on the premises all night.

Our collector of the port has no place to transact his business other than in his private office.

Our Federal judge is allowed only by the courtesy of the circuit judge to hold his court in the circuit-court room, there being no other place available.

The internal revenue officers transact their business in their bedrooms at the hotels; the surveyor of the port has his office in a small shed.

The United States commissioner and other Federal officers are compelled to transact their business in private offices.

The land suggested herein for a Federal building site is owned by the Territorial government and is under lease to various tenants whose terms expire within twelve months from date. For this the government would not be put to any expense. The site is admirably adapted for the purpose.

Hilo is the largest town on this island and is second in importance to Honolulu, and nearly the whole of the products of this island pass through Hilo to the market.

Assessed value of real estate and personal property.

For the district of Hilo in 1897 amounted to.....	\$5, 460, 631
For the district of Hilo in 1903 amounted to.....	11, 210, 321

Showing an increase in six years of.....	5, 749, 690
--	-------------

On the entire Island of Hawaii the assessed value of real and personal property in 1897 was.....	13, 504, 831
The assessed value of real and personal property in 1903 was.....	27, 559, 038

Showing an increase for six years of	14, 054, 207
--	--------------

Total number of vessels entered during—	
1897.....	37
1903.....	74

Total value of exports for the year ending June 30, 1904	\$3, 993, 871
Total value of imports for the same period was	1, 452, 535

The harbor at Hilo is practically an open roadstead with ample depth of water for vessels of the largest draft. Vessels lying at anchor in the harbor are liable at any moment to be caught in a northeast gale, and are in consequence in great danger of being cast on the reef or ashore, as there is no protection. Vessels are sometimes unable to discharge any of their cargo for ten to twelve days at a time during a northeast swell. The bay is the most commodious natural harbor in the Hawaiian Islands, it having an area of over 1,500 acres, and an available wharfage frontage of $1\frac{1}{2}$ miles. The entrance to this harbor is 1 mile wide, with a depth of water from 8 to 9 fathoms (as a reference to the chart will show), thus enabling vessels to enter with perfect safety either night or day.

The Hilo Railroad Company has constructed a wharf 100 feet by 800 feet long, at a cost of \$100,000. Deep-sea vessels do not use this except in the calmest weather, on account of the heavy swell and undertow, and as a consequence nearly every ton of freight is either loaded or discharged by means of lighters or scows between ship and shore. This can be obviated only by a breakwater.

We understand that a site for a quarantine station in Hilo has been selected by Doctor Cofer, the Federal quarantine officer, and that a

complete equipment, valued at \$10,000, is now in Honolulu awaiting the authorization for a proper building. The importance of immediate action in this matter is obvious.

A second-class light is needed at East Point. All vessels coming from the mainland come in from the direction of that point.

In view of the foregoing, therefore, we earnestly recommend the favorable consideration by Congress in connection with the suggestions enumerated.

Respectfully submitted.

THE HILO BOARD OF TRADE,
By E. N. HOLMES, *President*.
By A. VICARS, *Secretary*.

A. L. C. ATKINSON, ESQ.,

Acting Governor Territory of Hawaii, Honolulu.

E.

Letter from the Wailuku Improvement Association.

WAILUKU, MAUI, August 13, 1904.

SIR: In reply to your wireless communication of July 28, 1904, to Mr. A. N. Kupoikai, which reads as follows: "What recommendations from Wailuku Improvement Association for Federal improvements for Maui," the undersigned, a committee duly appointed for that purpose in open session of the Improvement Association of Wailuku District, do hereby most respectfully make the following recommendations:

First. A Federal building to be erected in Wailuku on a suitable site hereafter to be selected, the same to be large and commodious enough to provide quarters for the following branches of the United States Government: Post-office, chambers and court room for United States district attorney, clerk of the Federal court, United States marshall, internal-revenue officers, United States commissioner, and such other branches of the Federal Government as the Department may see fit to provide.

For the erection of a building suitable for the above purposes we would recommend the expenditure of \$75,000.

Second. We would further recommend a complete and minute geodetic survey of the islands of Maui, Molokai, Lanai, and Kahoolawe, and the proper charting thereof.

Third. We would further recommend the erection of proper and suitable lights at the following points, to wit: Molokai Point, Kamalo, Honokohau, Kahului, Huelo, Nahiku, Hana, Kipaulu, Makena, Maalaea Bay, Lahaina, Kaanapali, Maunalei, Lanai, Molokini, north of Kahoolawe, and south of Kahoolawe. Regarding Lahaina light we would recommend that the same be reconstructed in such a manner as to be infallibly distinguished from all other lights in that vicinity.

Fourth. We would recommend the construction of a breakwater at Kahului to extend from the shore to a point now commonly known as the American Girl Rock, or a distance of 2,600 feet. The construction of such a breakwater would afford perfectly safe anchorage for numerous vessels, and will besides make possible the construction of

permanent and commodious wharves, an undertaking which has so far been rendered impossible by the absence of a breakwater. Exhaustive surveys have been made at the instance of the Kahului Railroad Company, which prove beyond a doubt that the construction of a breakwater is not alone highly feasible, but that the same can be undertaken and carried on to a successful finish for a sum not exceeding \$250,000. We would therefore recommend the appropriation of the above-named amount for a breakwater at Kahului.

In support of the above recommendation we would respectfully set forth the fact that the value of the exports and imports of Kahului alone amounts to some \$6,000,000 per annum. In addition the value of ships, owing partly to their large tonnage, and to the fact that at the time of their arrival they already contain large and valuable cargoes, must be from three to four times the value of the Kahului business.

Respectfully submitted.

R. W. FILLER, *Chairman.*

C. D. LUFKIN.

W. F. CROCKETT.

HUGH M. COKE.

W. G. SCOTT.

A. N. KEPOIKAI.

Hon. A. L. C. ATKINSON,

Acting Governor, Honolulu, Hawaii.

TERRITORIAL REGISTER AND DIRECTORY FOR 1904.

TERRITORIAL OFFICIALS.

GEORGE R. CARTER, Governor.
A. L. C. ATKINSON, Secretary.
LORRIN ANDREWS, Attorney-General.
C. J. CAMPBELL, Treasurer.
C. S. HOLLOWAY, Superintendent Public Works.

A. T. ATKINSON, Superintendent Public Instruction.
J. H. FISHER, Auditor.
F. D. CREEDON, Private Secretary to Governor.

JONAH K. KALANIANA'OLE, Delegate to Congress.

DEPARTMENT OF JUDICIARY.

SUPREME COURT.

Hon. W. F. FREAR, Chief Justice.
Hon. A. S. HARTWELL, Associate Justice.
Hon. F. M. HATCH, Associate Justice.
HENRY SMITH, Clerk Judiciary Department.
Hon. J. T. DE BOLT, First Judge, First Circuit, Oahu.
Hon. GEORGE D. GEAR, Second Judge, First Circuit, Oahu.

Hon. W. J. ROBINSON, Third Judge, First Circuit, Oahu.
Hon. A. N. KEPOIKAI, Second Circuit, Maui.
Hon. J. A. MATTHEWMAN, Third Circuit, Hawaii.
Hon. C. F. PARSONS, Fourth Circuit, Hawaii.
Hon. W. J. HARDY, Fifth Circuit, Kauai.

FEDERAL OFFICIALS.

DEPARTMENT OF JUSTICE.

UNITED STATES DISTRICT COURT.

Hon. SANFORD B. DOLE, Presiding Judge.
R. W. BRECKONS, United States Attorney.
J. J. DUNNE, Assistant United States Attorney.
E. R. HENDRY, United States Marshal.
F. L. WINTER, Office Deputy United States Marshal.

FRANK L. HATCH, Miss F. M. HANDY, Deputy Clerks.
A. F. JUDD, United States Commissioner.

TREASURY DEPARTMENT.

CUSTOMS DIVISION.

E. R. STACKABLE, Collector.
R. C. STACKABLE, Special Deputy Collector.
RAYMER SHARP, Chief Examiner.
E. A. JACOBSON, Deputy Collector.
B. GRIGGS HOLT, United States Shipping Commissioner.

JOHN B. DIAS, Deputy United States Shipping Commissioner.
J. C. RIDGWAY, Deputy Collector, Hilo.
E. H. BAILEY, Deputy Collector, Kahului.
E. A. FRASER, Deputy Collector, Mahukona.
W. D. MCBRYDE, Deputy Collector, Koloa.

IMMIGRATION SERVICE.

F. M. BECHTEL, Inspector in Charge.

R. C. BROWN, G. R. CULLEN, and R. L. HALSEY.

Chinese Bureau.

JOSHUA K. BROWN, Chinese Inspector in Charge.

INTERNAL-REVENUE SERVICE.

R. H. CHAMBERLAIN, Collector Internal Revenue.
H. D. COUZENS, Chief Deputy Collector.

W. F. DRAKE, Division Deputy.
A. M. WEBSTER, Deputy and Gauger.

COAST SURVEY DIVISION.

W. D. ALEXANDER, Assistant in United States Coast and Geodetic Survey, in charge of Branch Office.

S. A. DEEL, Aid in United States Coast and Geodetic Survey, in charge of Magnetic Observatory near Sisal Station, Ewa.

DEPARTMENT OF AGRICULTURE.

HAWAII EXPERIMENTAL STATION.

JARED G. SMITH, Expert and Special Agent in Charge.
F. E. CONTER, Expert and Special Agent.

D. L. VAN DINE, Expert and Special Agent.

POST-OFFICE DEPARTMENT.

LORIN H. BRICKET, Inspector in Charge.
 GEORGE W. CARR, Assistant Superintendent
 Railway-Mail Service.
 JOSEPH M. OAT, Postmaster,
 L. T. KENAKE, Cashier and Assistant Postmaster.

JOHN T. STAYTON, Assistant Cashier.
 GEORGE L. DESHA, Chief Registry Clerk.
 F. E. COLBY, Chief Money-Order Clerk.
 W. C. KENAKE, Chief Mailing Clerk.
 E. M. BROWN, Chief Distributor.

WAR DEPARTMENT.

UNITED STATES NAVAL STATION, HAWAII.

Capt. HENRY W. LYON, U. S. Navy, Commandant.
 Lieut. Commander A. P. NIBLACK, Captain of Yard.
 U. S. G. WHITE, U. S. Navy, Civil Engineer.

W. E. TAYLOR (retired), Surgeon, Medical Inspector.

UNITED STATES ARMY DIVISION.

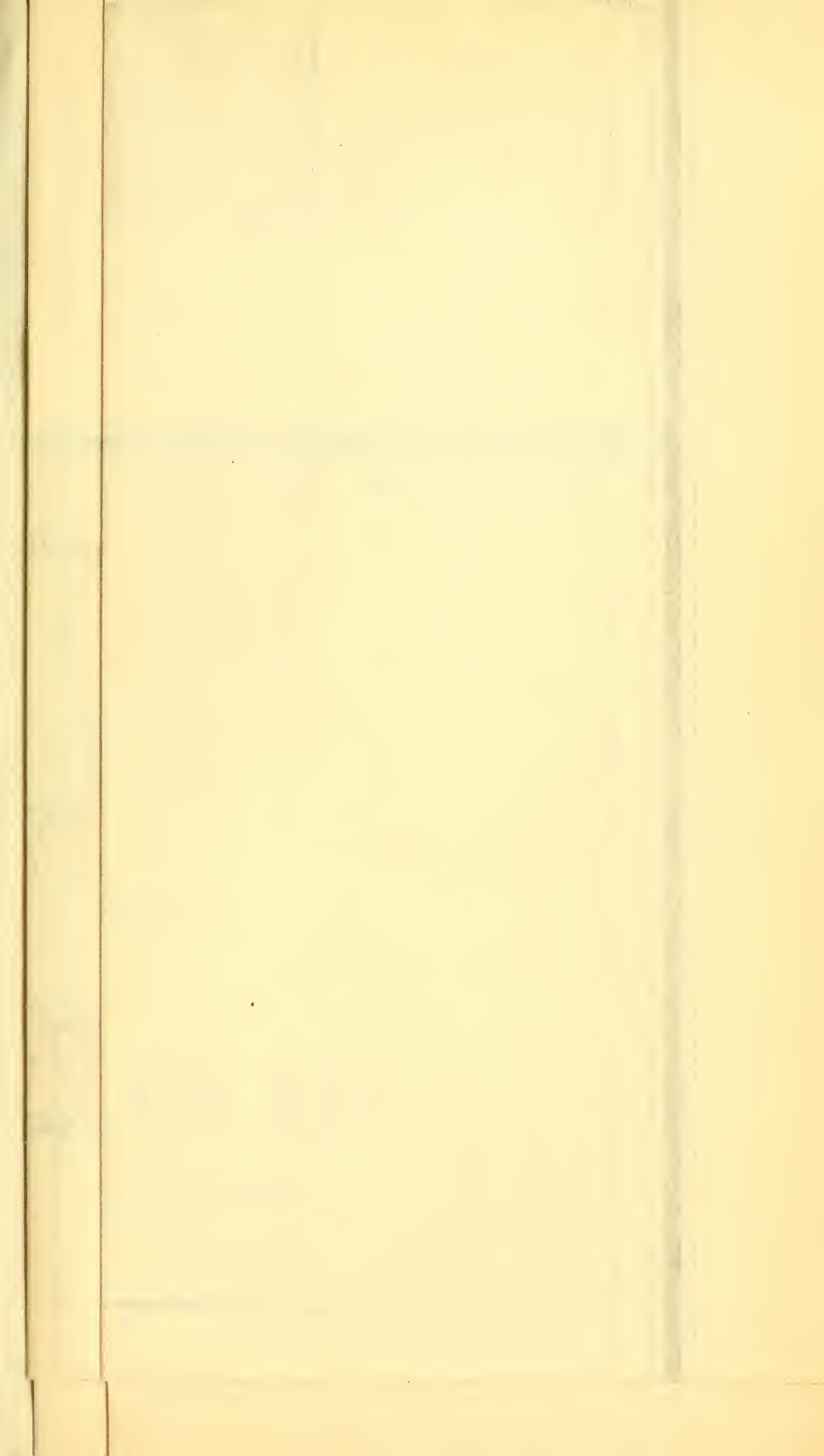
Lieut. Col. JOHN MCCLELLAN, Artillery Corps,
 Commanding Camp McKinley.

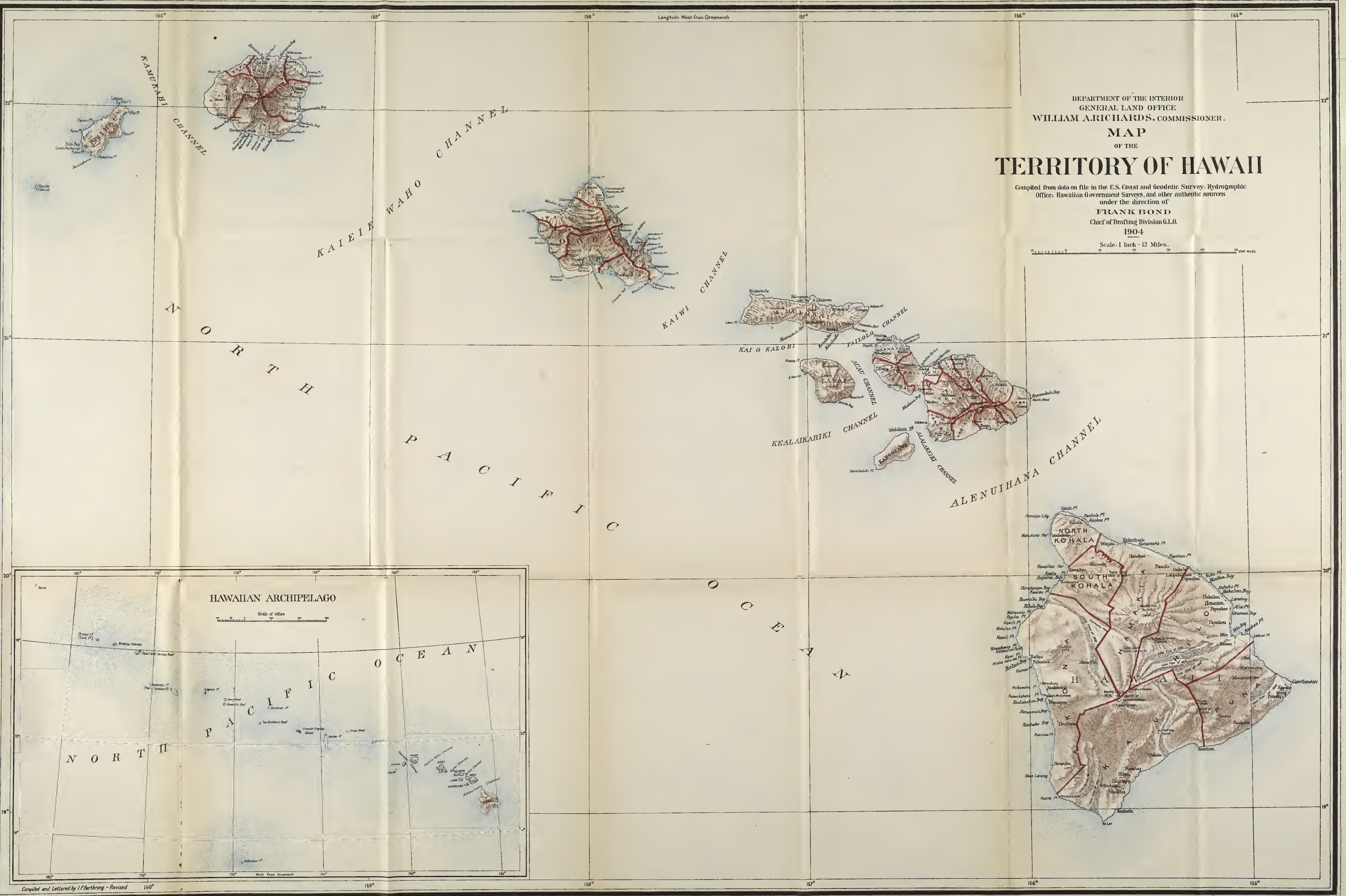
Capt. C. F. HUMPHREY, Jr., Quartermaster U. S. Army.

PUBLIC HEALTH AND MARINE-HOSPITAL SERVICE.

L. E. COFER, P. A. Surg., U. S. M. H. S., In Command.
 M. J. WHITE, P. A. Surg., U. S. M. H. S.
 W. C. HOBODY, P. A. Surg., U. S. M. H. S.
 R. L. WILSON, Asst. Surg., U. S. M. H. S.
 A. N. SINCLAIR, Acting Asst. Surg., U. S. M. H. S.
 WILLIAM T. JAMES, Acting Asst. Surg., U. S. M. H. S.
 FRANK L. GIBSON, Pharmacist, U. S. M. H. S.
 JOHN G. GRACE, Acting Asst. Surg., U. S. M. H. S.,
 Hilo, Hawaii.

JOHN WEDDICK, Acting Asst. Surg., U. S. M. H. S.,
 Kahului, Maui.
 R. H. DINEGAR, Acting Asst. Surg., U. S. M. H. S.,
 Kihei, Maui.
 R. L. PETERS, Acting Asst. Surg., Lahaina, Maui.
 E. S. GOODHUE, Acting Asst. Surg., U. S. M. H. S.,
 Koloa, Kauai.
 B. D. BOND, Acting Asst. Surg., U. S. M. H. S.,
 Mahukona, Hawaii.



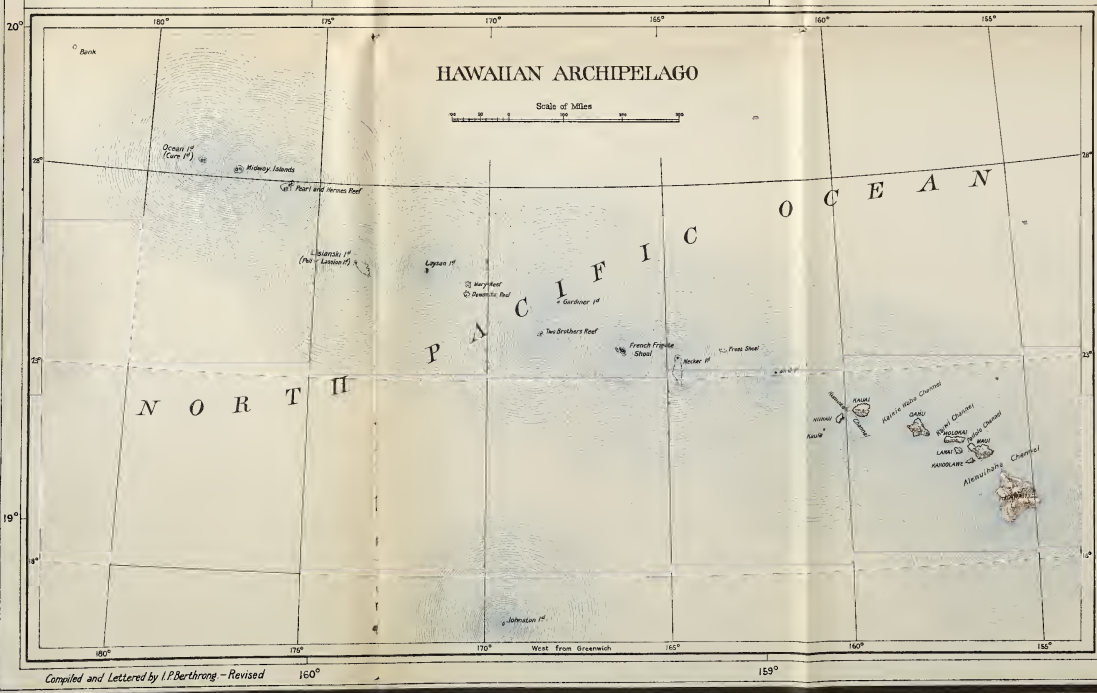


DEPARTMENT OF THE INTERIOR
GENERAL LAND OFFICE
WILLIAM A. RICHARDS, COMMISSIONER.

MAP
OF THE
TERRITORY OF HAWAII

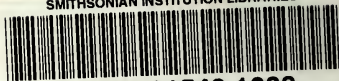
Compiled from data on file in the U.S. Coast and Geodetic Survey, Hydrographic Office; Hawaiian Government Surveys, and other authentic sources
under the direction of
FRANK BOND
Chief of Drafting Division G.L.O.
1904

Scale: 1 Inch = 12 Miles.





SMITHSONIAN INSTITUTION LIBRARIES



3 9088 01549 1038